



# **Armed Forces College of Medicine AFCM**



# **Pancreas and spleen**

## **By Professor**

## **Dr. Shahira Youssef**



**By the end of this lecture the student should be able to :**

**Describe the different terms related to the movements**

- Describe position , surfaces , borders , relations , blood supply of pancreas and spleen

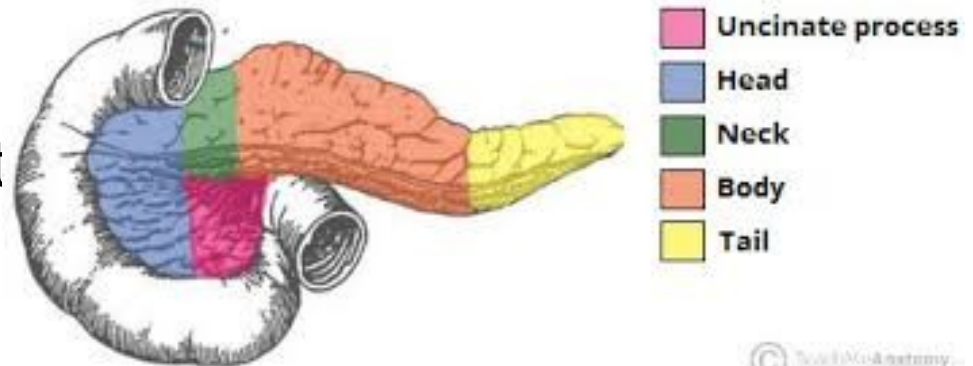


# Pancreas

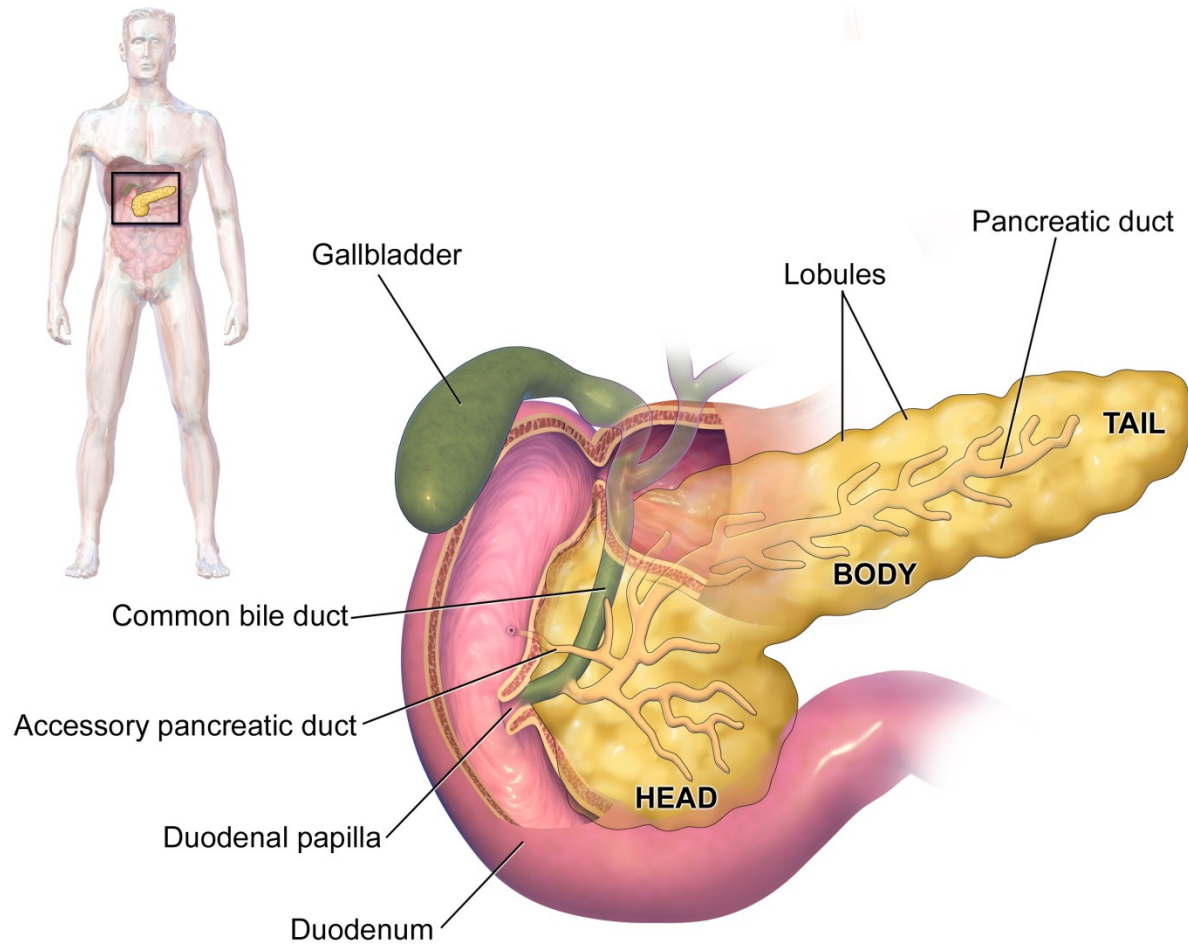
- ❑ Mixed lobulated soft gland that lies on posterior abdominal wall 12- 15 cm long
- ❑ Extends from duodenum to spleen
- ❑ Neck lies at **transpyloric plane**
- ❑ **Lies in epigastric & left hypochondrium**
- ❑ **Retroperitoneal**

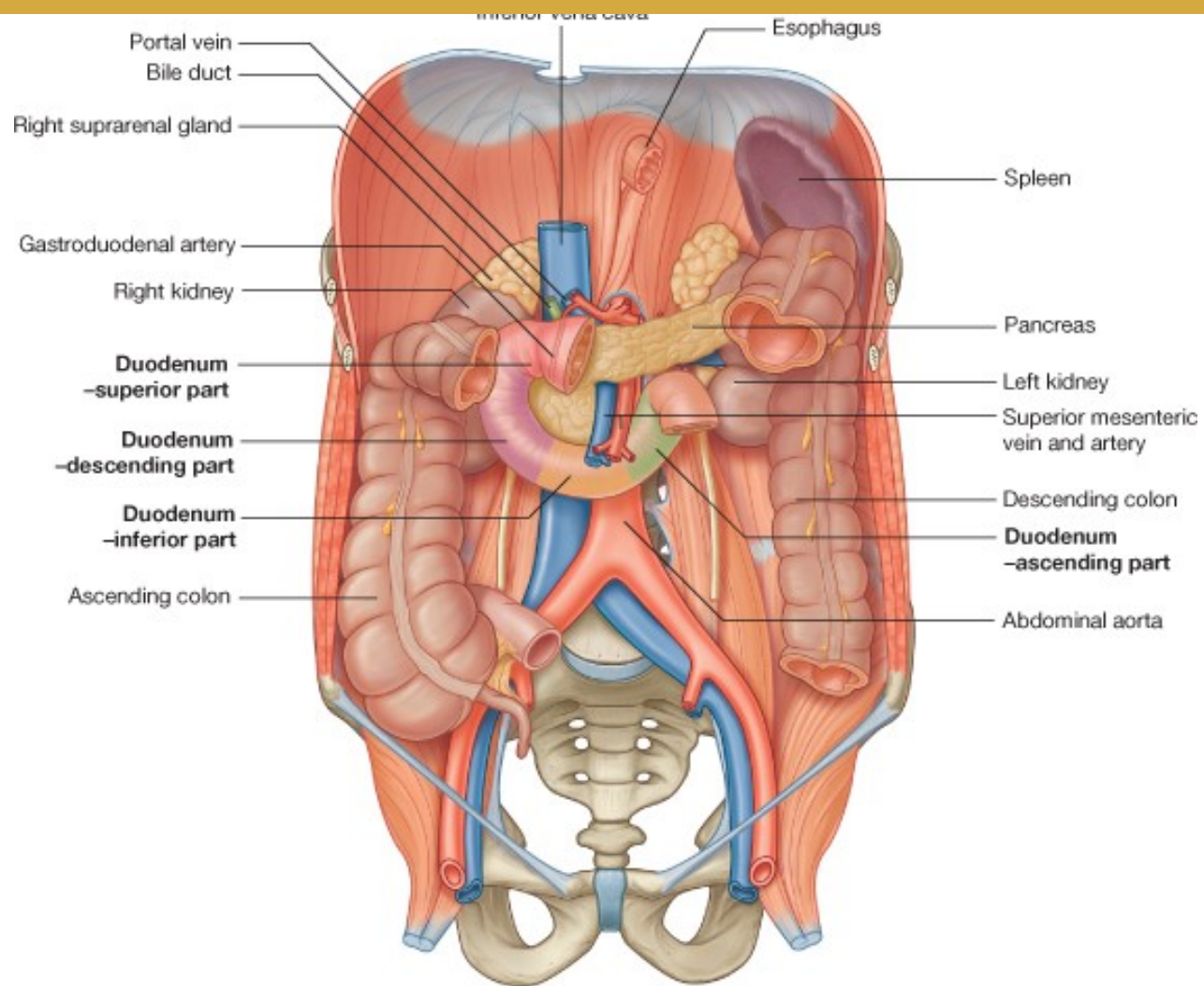
## Parts:

- **Head**: right expanded It gives a hook-like projection from the lower left part called **uncinate process**
- **Neck**: constricted
- **Body**: main
- **Tail**: narrow to the left



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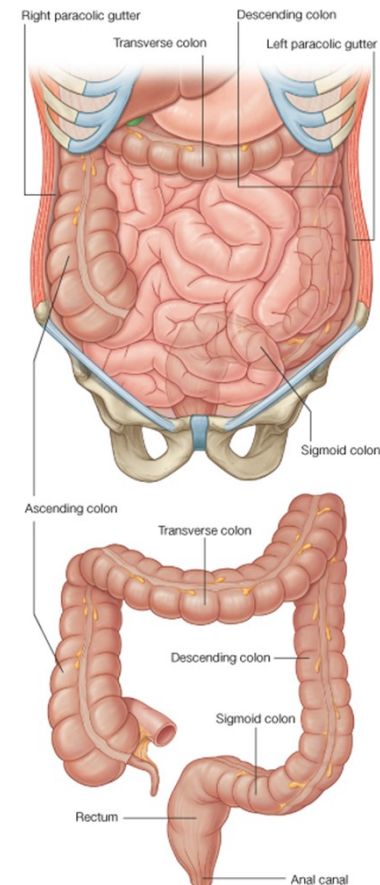
# Head of Pancreas

- ❑ Lies in duodenal curve
- ❑ In groove between head and duodenum lies.....
- ❑ A projection of head from the lower left part is known as uncinata process

## Relations of head:

### **Anterior :**

- Transverse colon above
- Coils of jejunum below





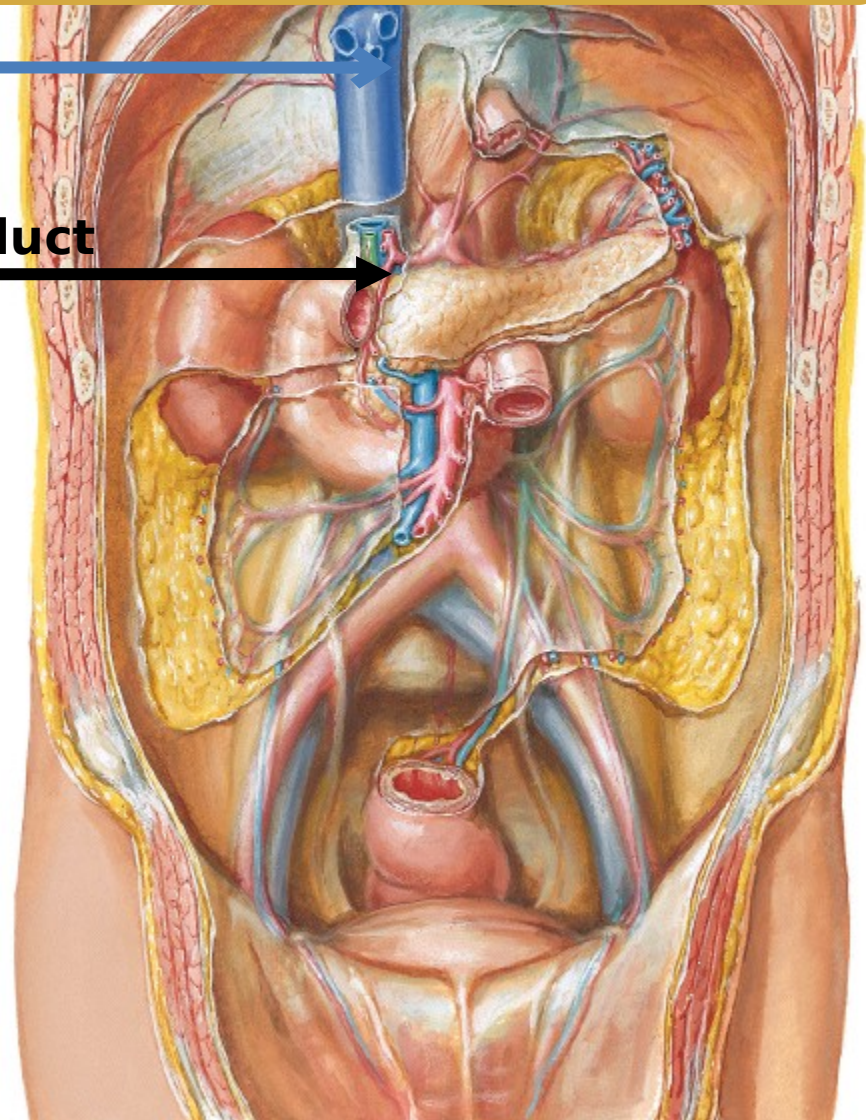
# Posterior relations of head Pancreas



- ☐ Right crus
- ☐ **Bile duct embedded or lodged in a groove**
- ☐ IVC & termination of renal veins

IVC

Bile duct

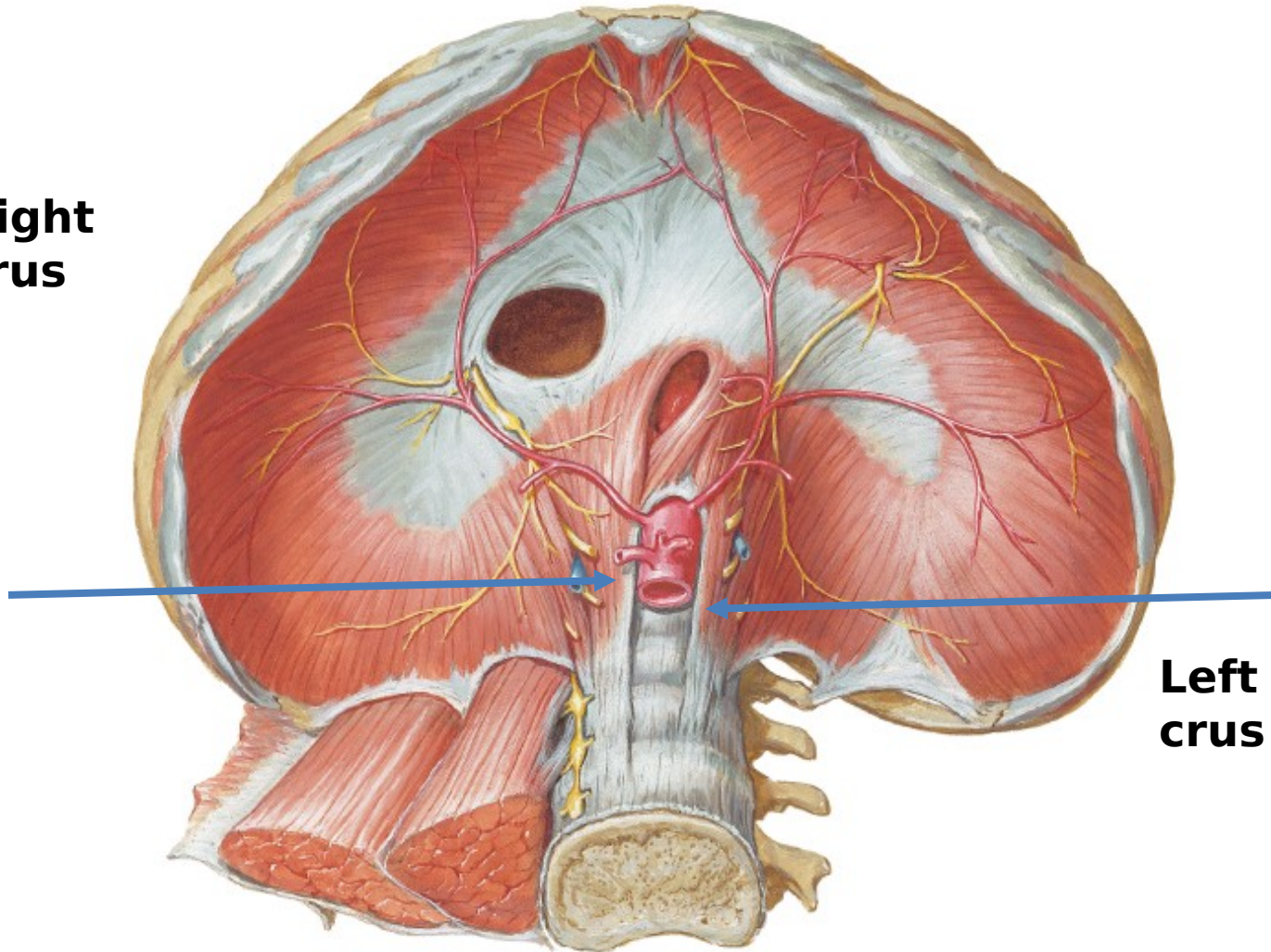


***RIB ????????***





**Right  
crus**

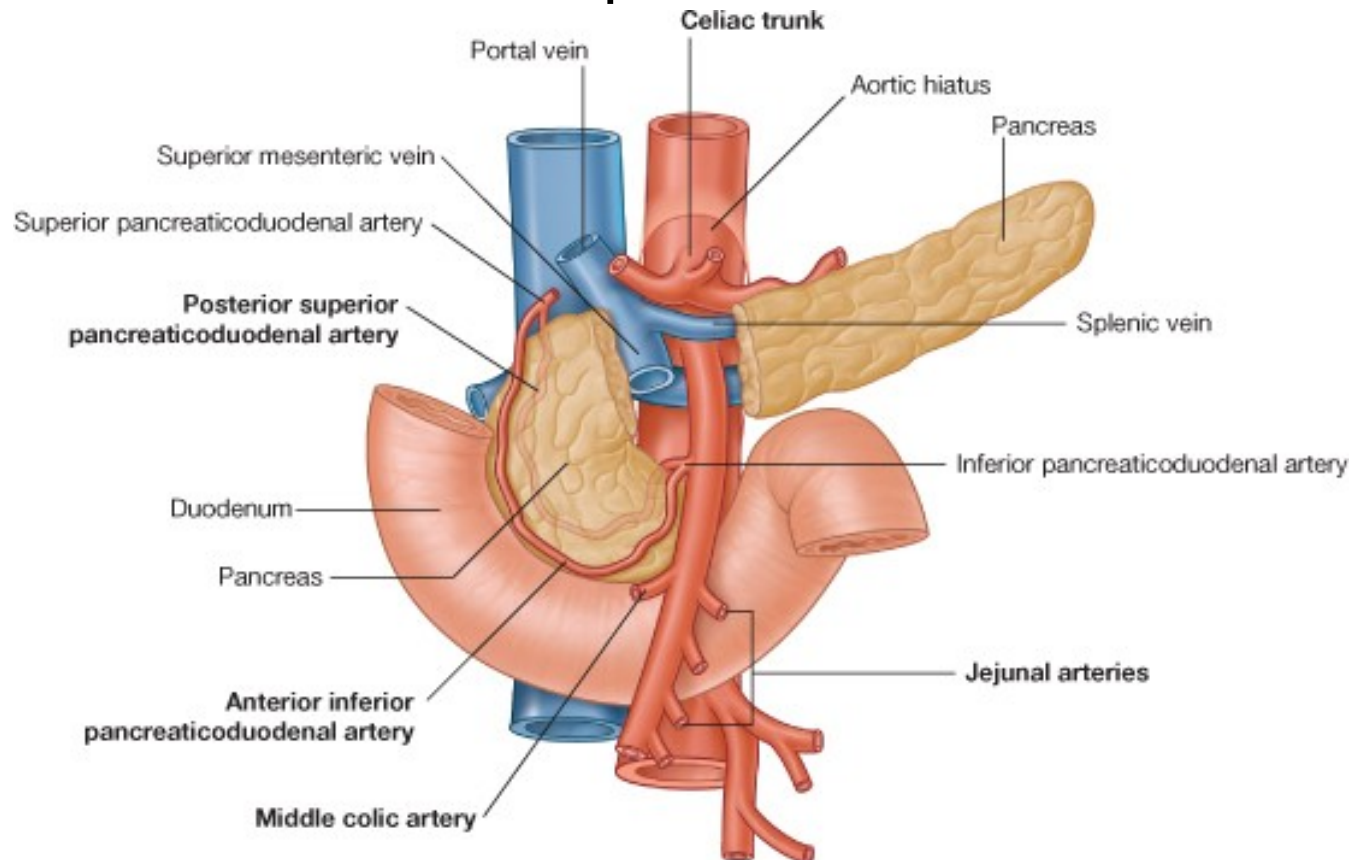


**Left  
crus**

# Pancreas



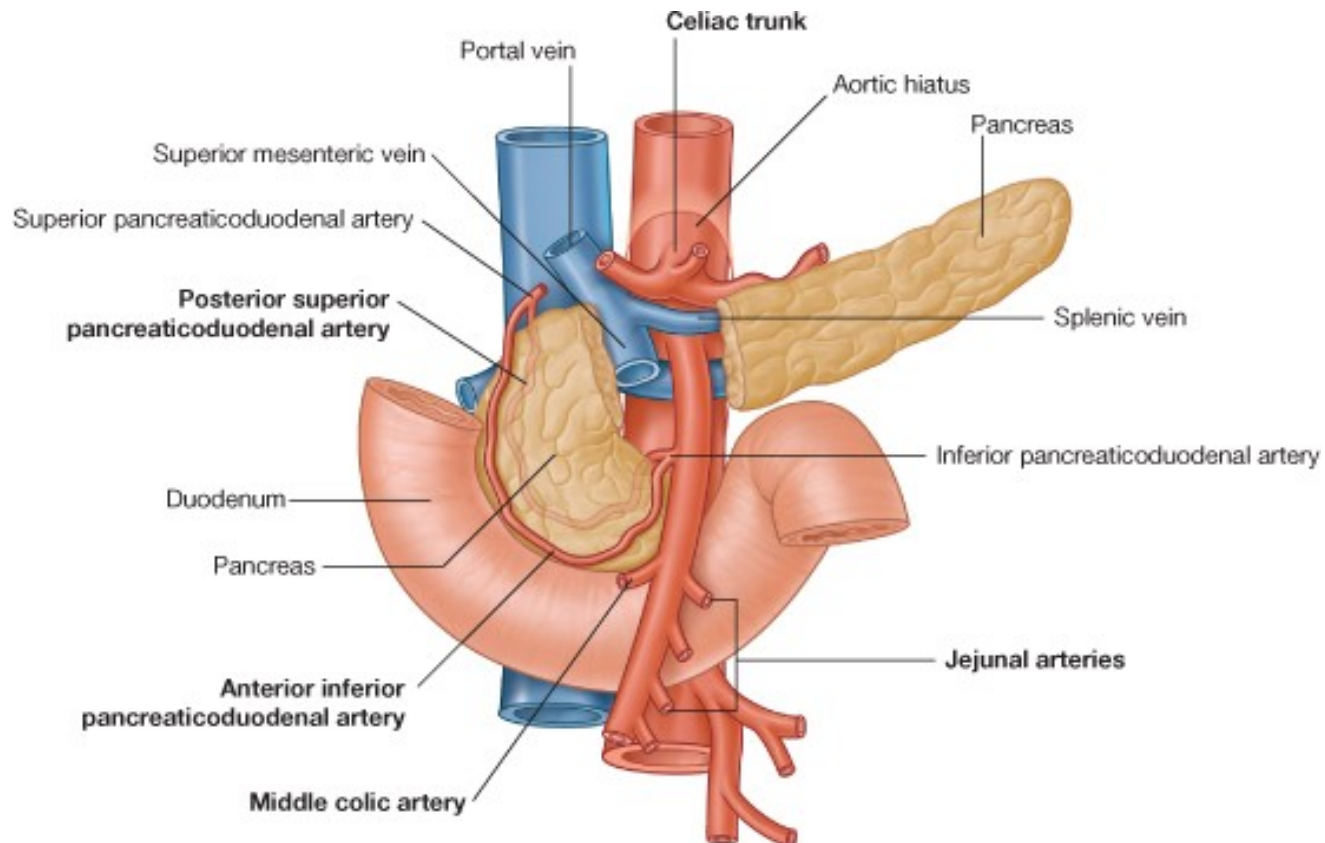
**Anterior to uncinate :** superior mesenteric vessels



# Pancreas



**Posterior to uncinate : Aorta**

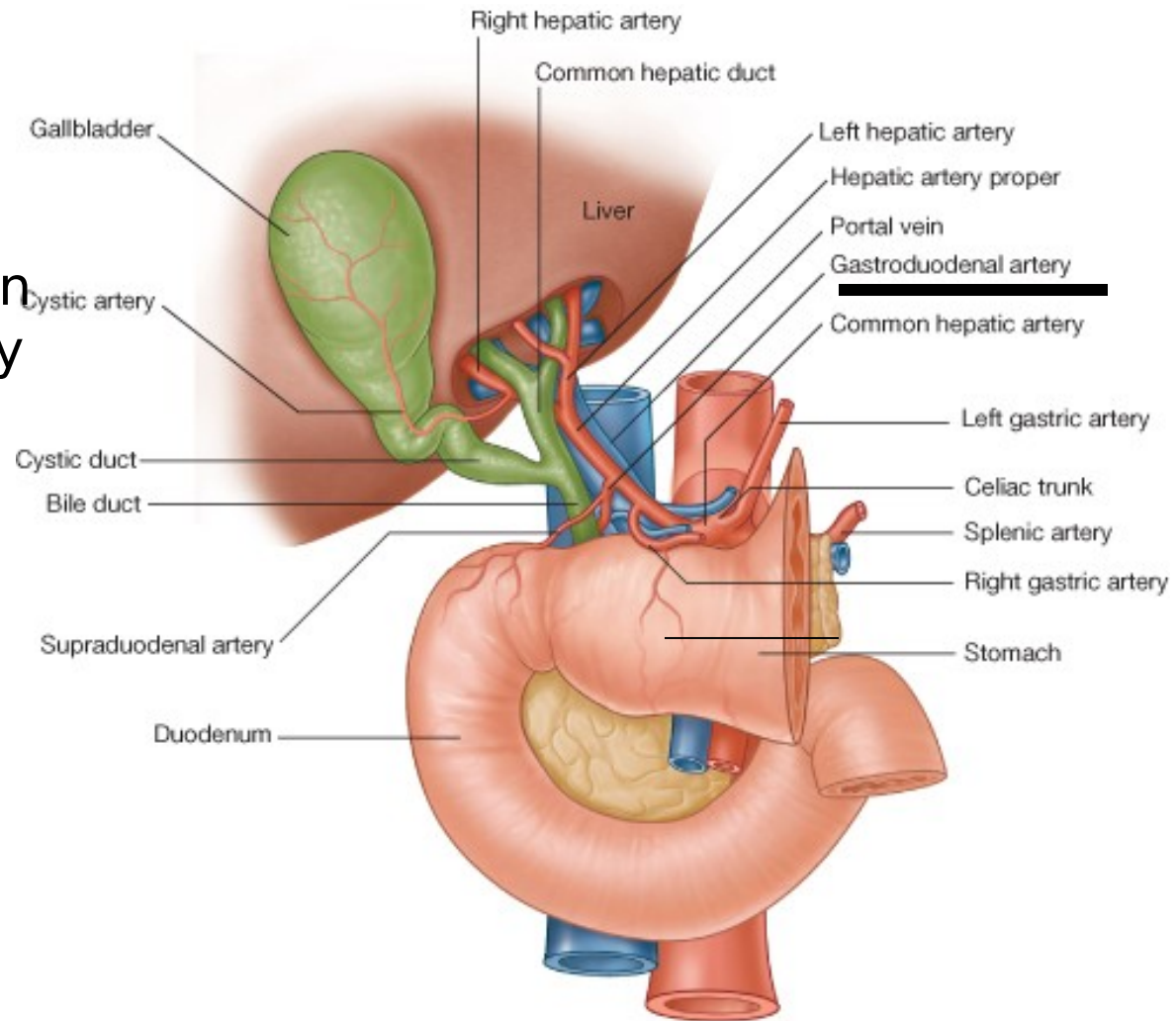


# Neck of Pancreas



## Anterior to neck:

- ☐ Pyloroduodenal junction
- ☐ Gasteroduodenal artery



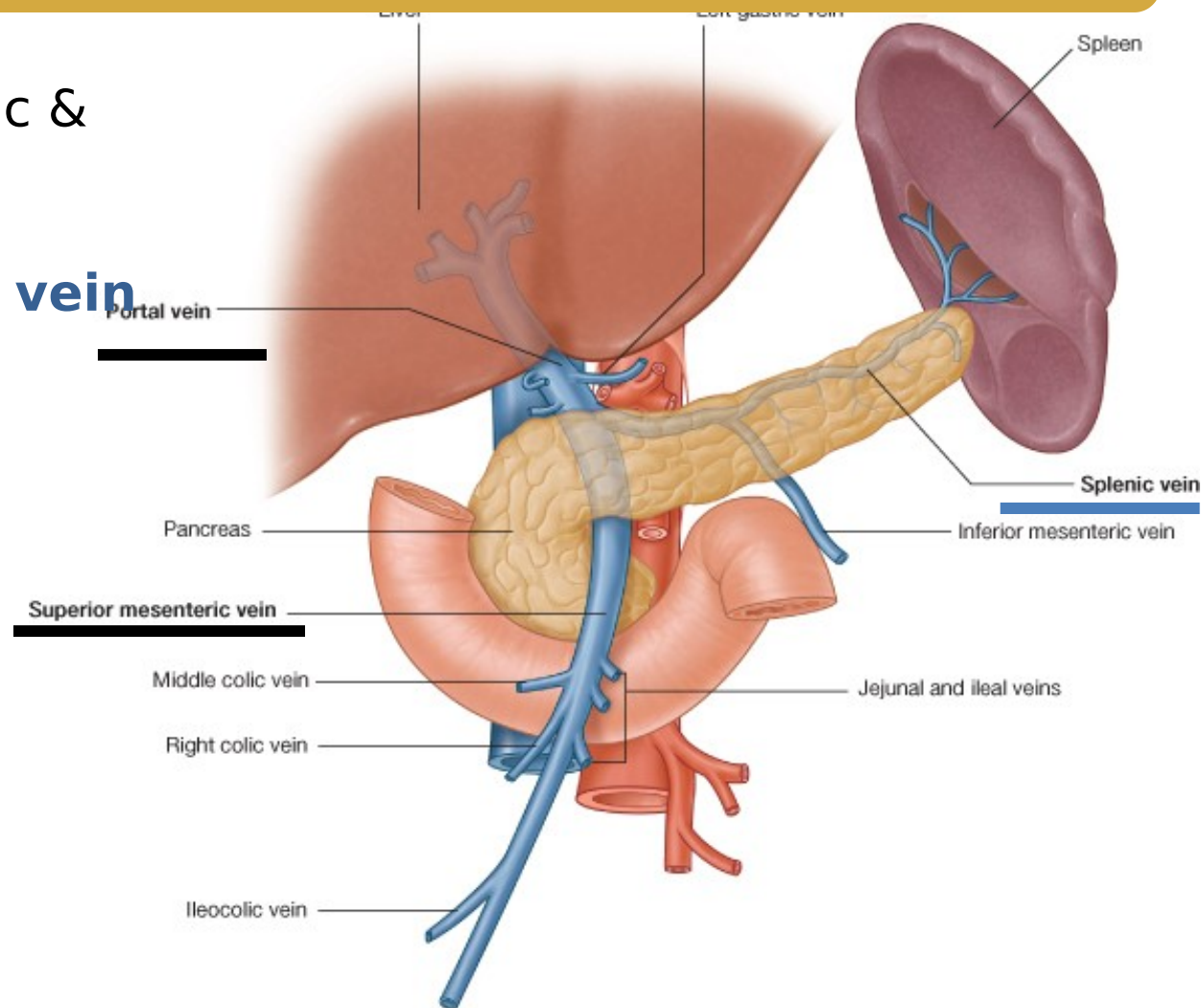


# Neck of Pancreas

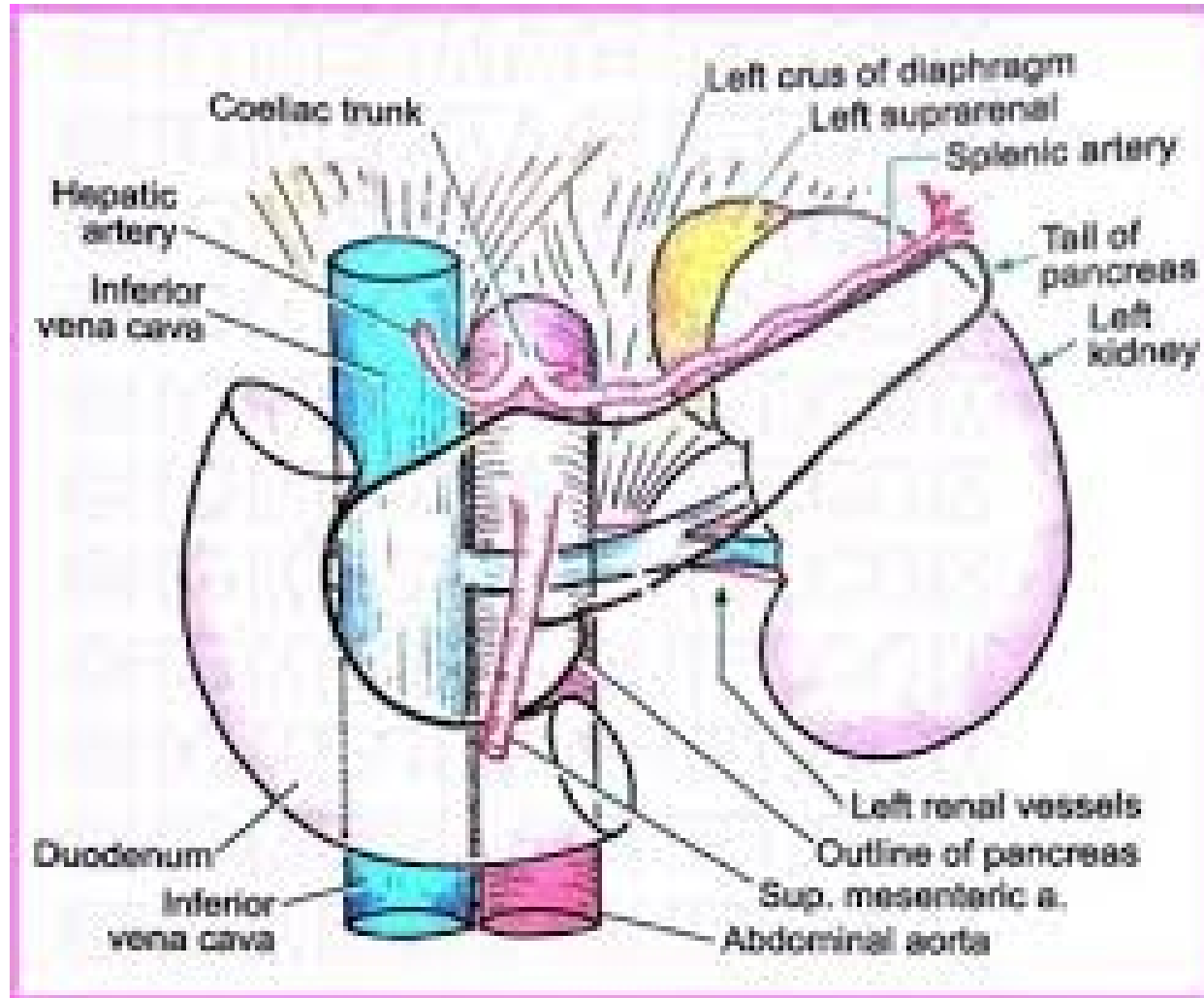


## Posterior to neck:

- Termination of splenic & superior mesenteric veins
- beginning of **Portal vein**



# Pancreas





# Body of pancreas



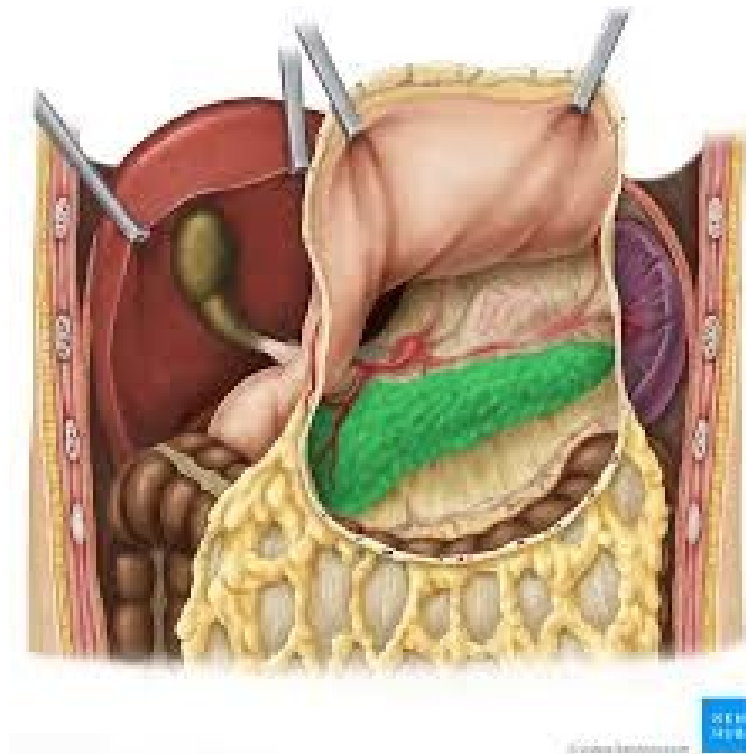
## **Anterior surface:**

- ❖ Stomach
- ❖ Posterior wall of lesser sac

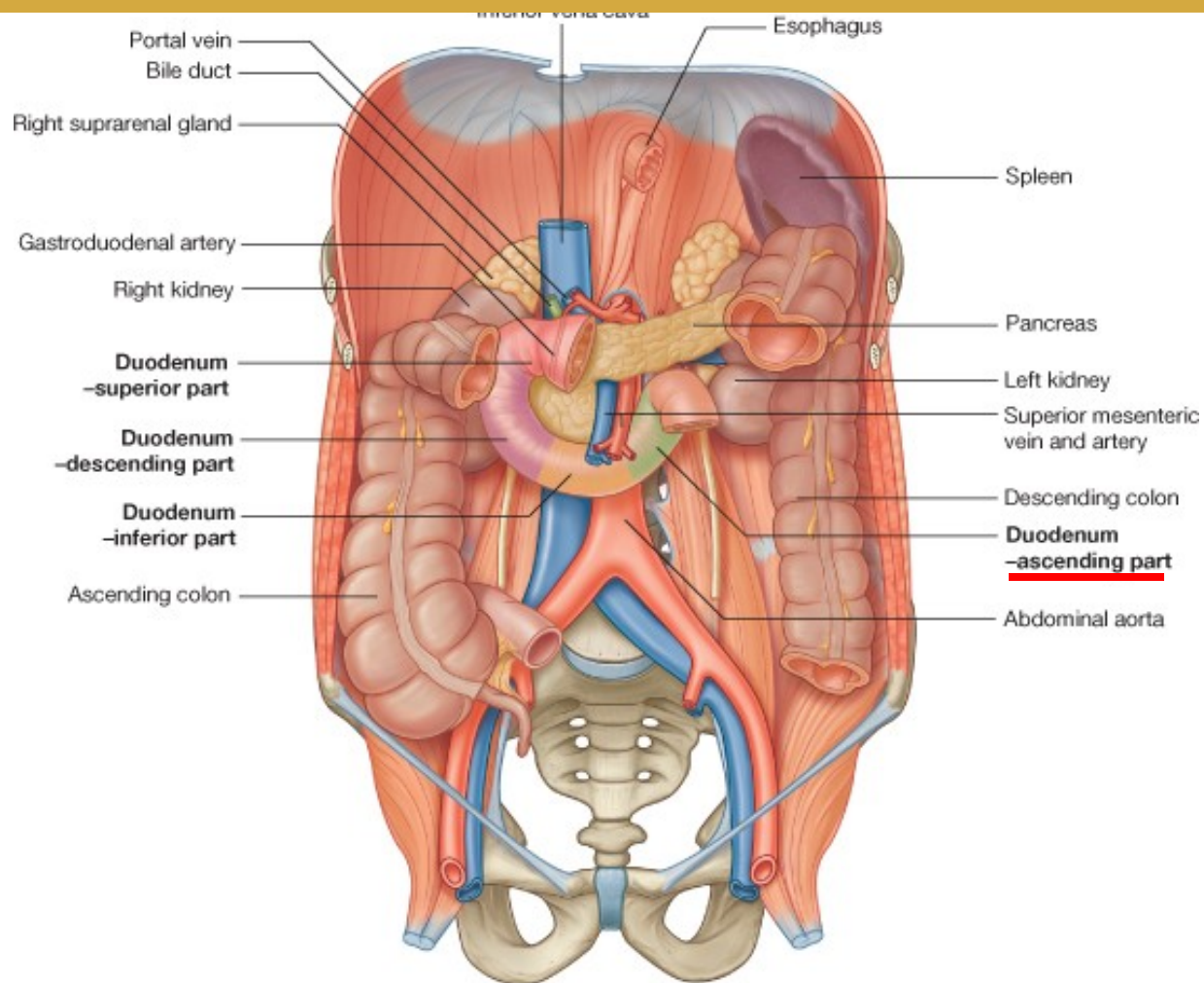
## **Inferior surface**

- ✓ Duodeno jejunal junction
- ✓ Coils of jejunum
- ✓ Left colic flexure

# Anterior relations of body of Pancreas



# Pancreas

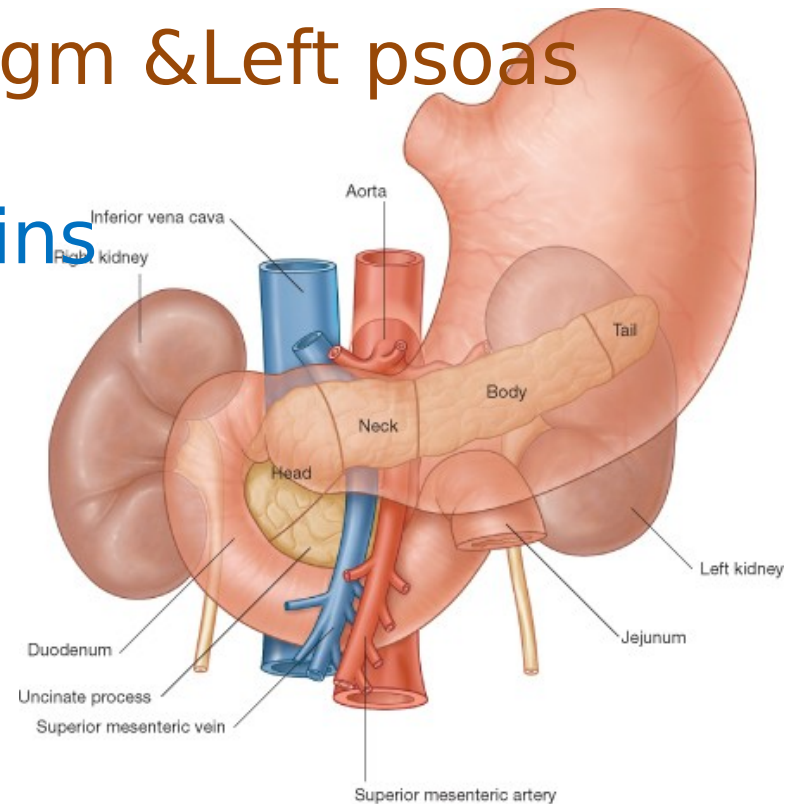


# Posterior surface of body of Pancreas

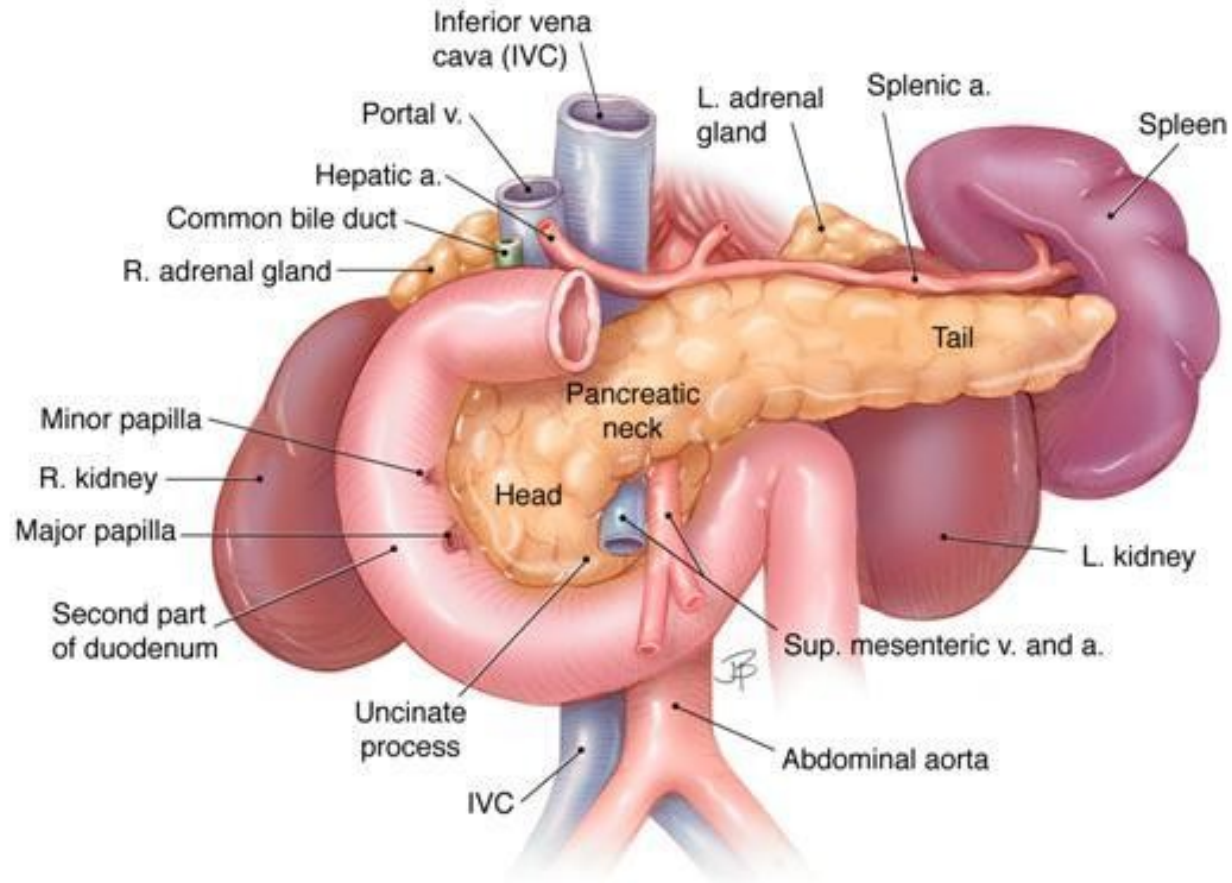


## Posterior surface

- Abdominal aorta and superior mesenteric
- Muscles : Left crus of diaphragm & Left psoas
- Left kidney & Left supra renal
- Veins: splenic + left renal veins

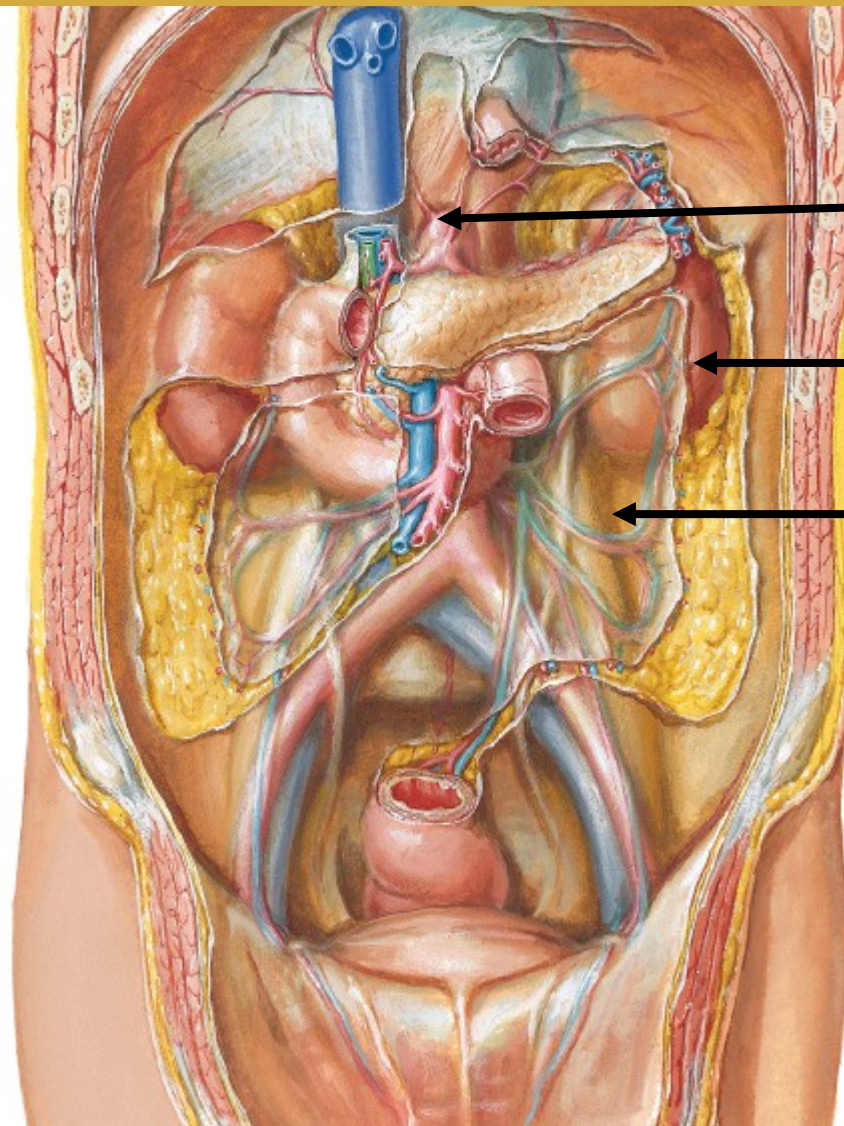


# Pancreas





# Pancreas



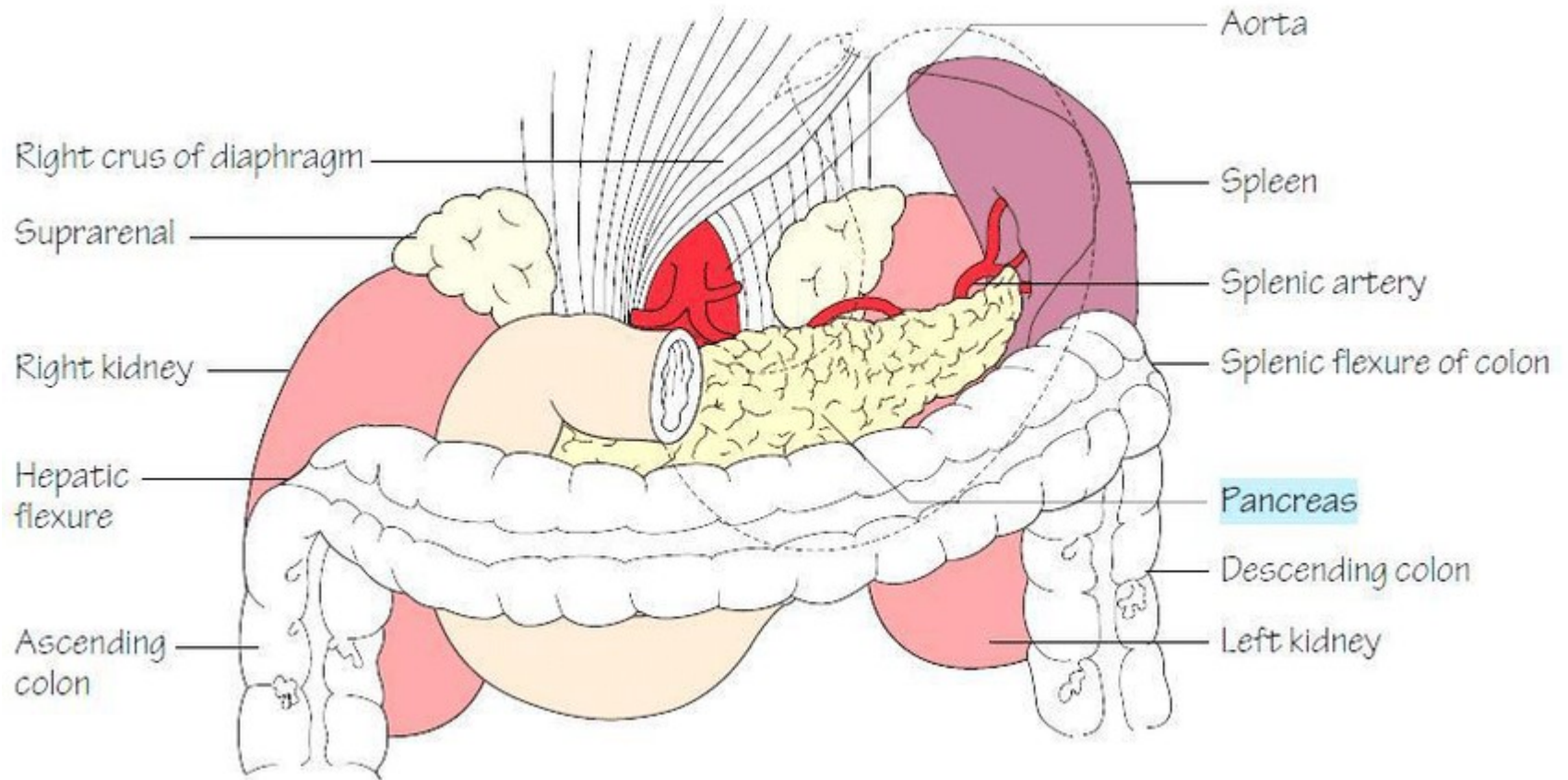
**Aorta**

**Left kidney**

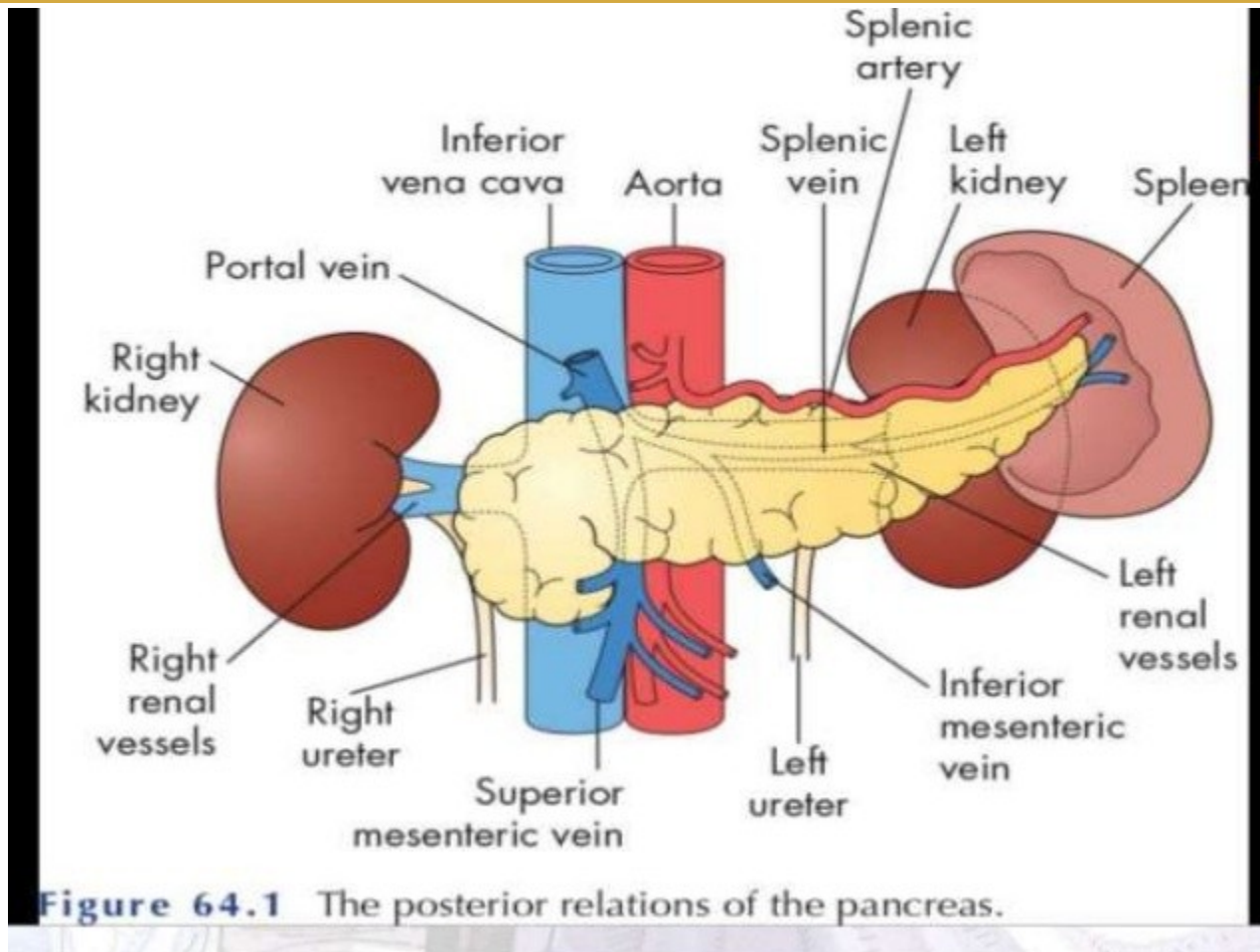
**Left psoas**



# Pancreas



# Pancreas



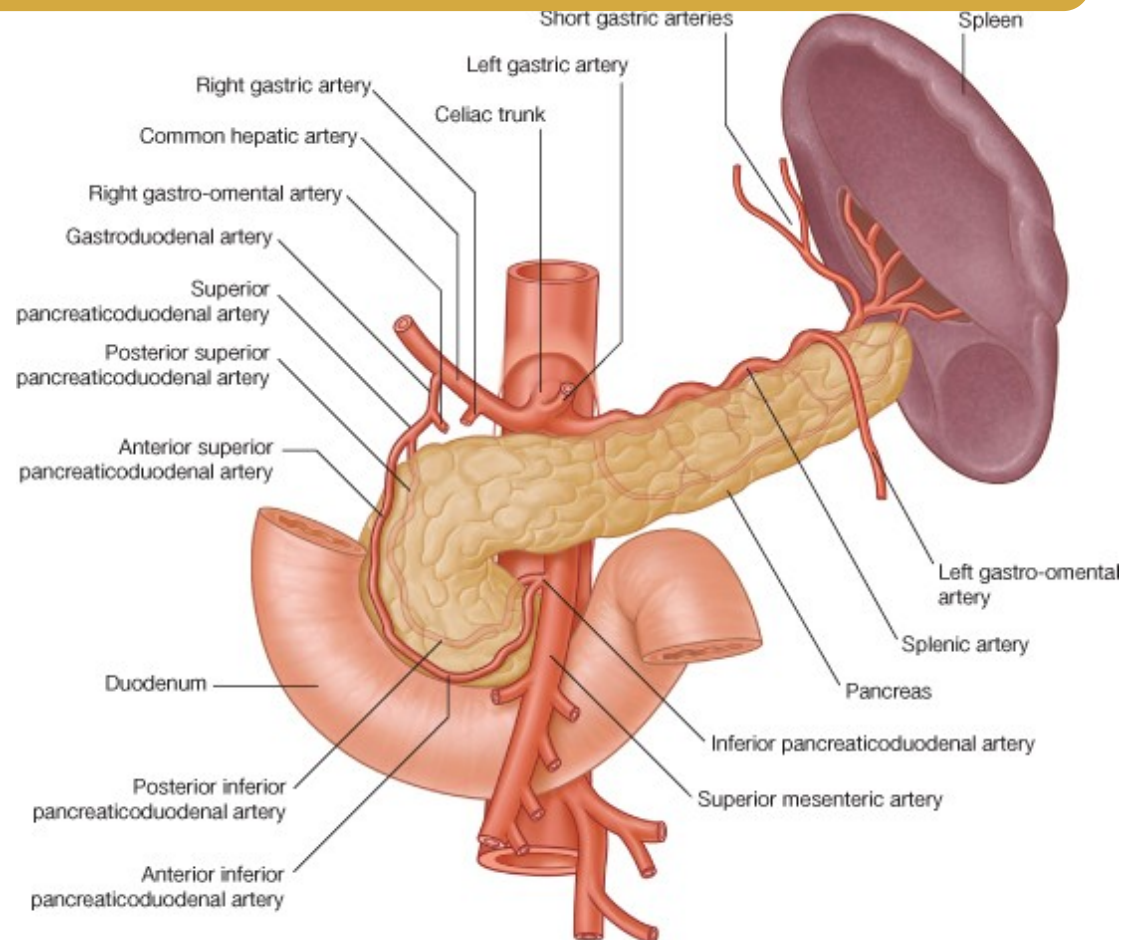
**Figure 64.1** The posterior relations of the pancreas.

# Tail of Pancreas

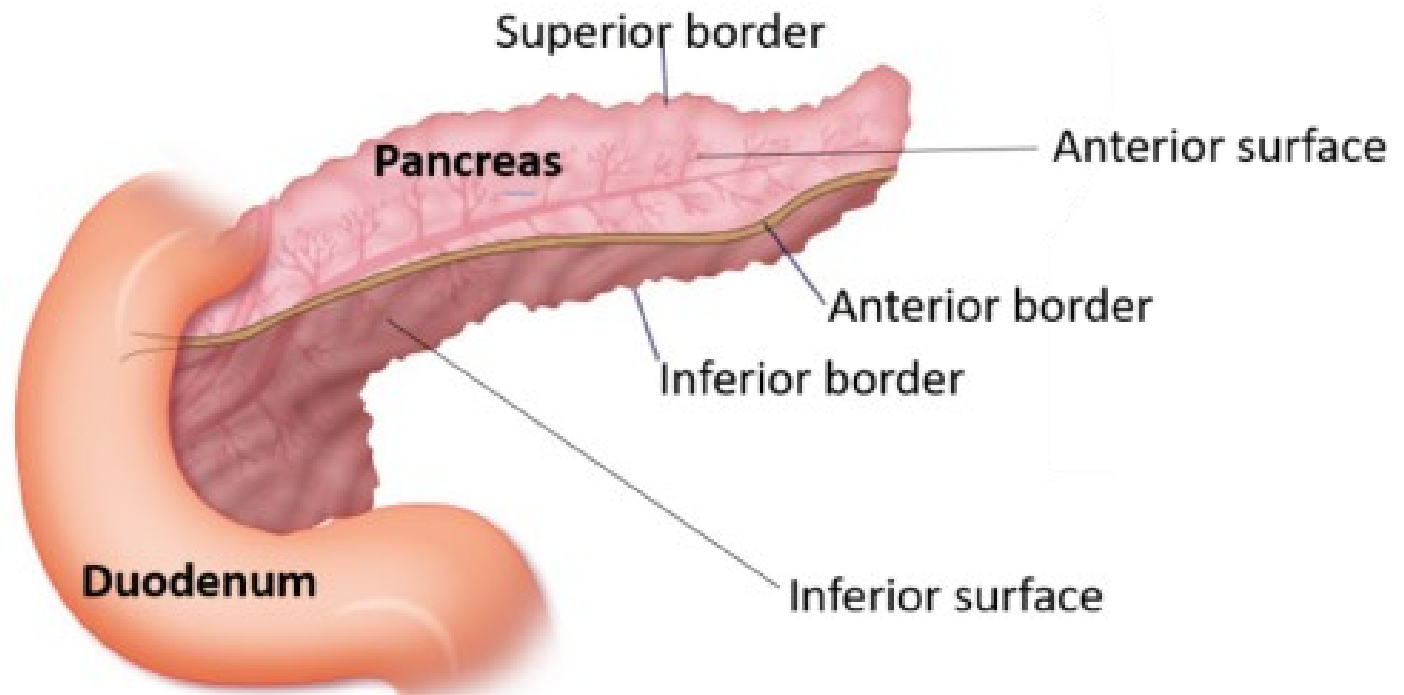


## Tail:

- Lies in lienorenal ligament
- related : spleen below hilum



# Borders of Pancreas



# Borders of Pancreas



## Anterior border:

gives attachment to greater omentum & transverse mesocolon

## Upper border:

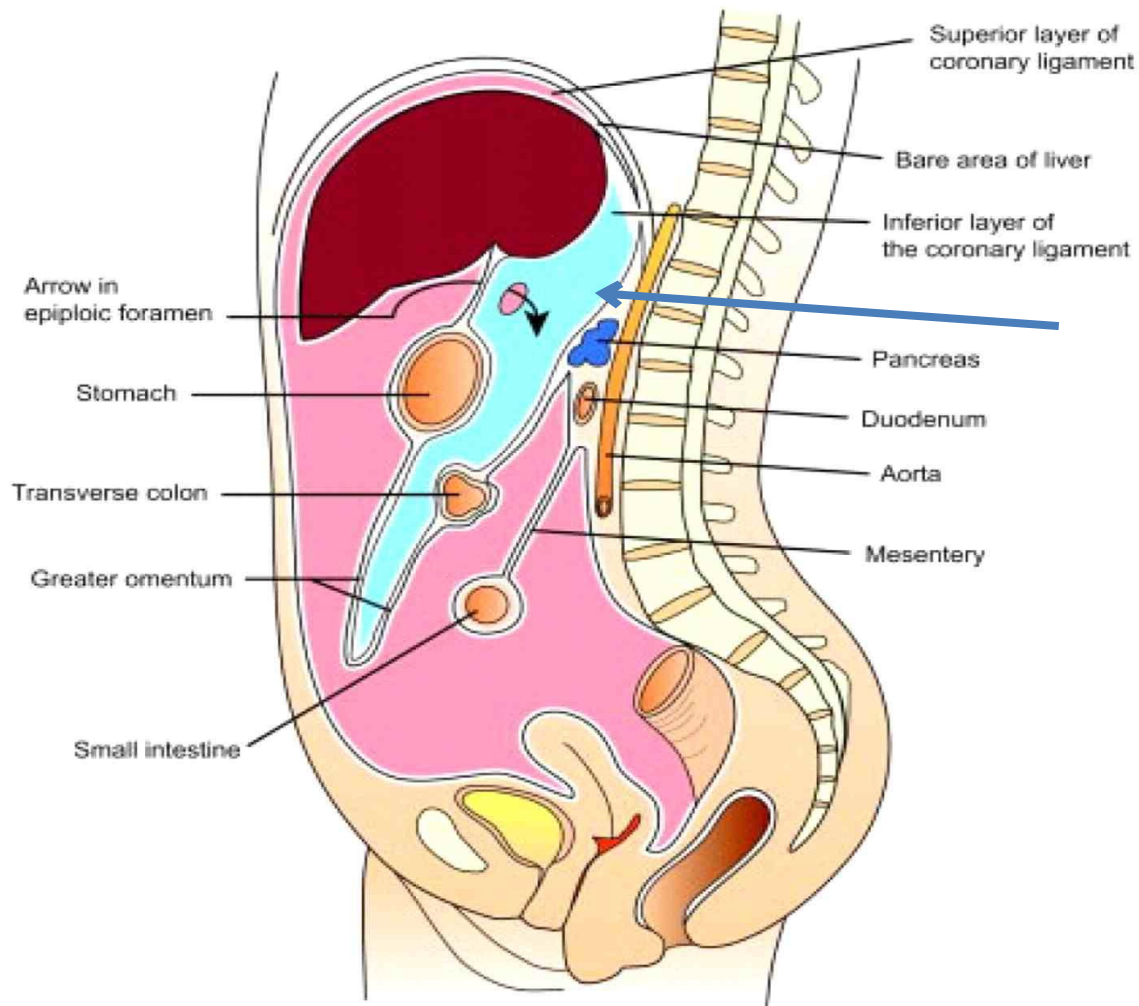
- from its right projects omental tuberosity

The border is related to

- celiac trunk,
- common hepatic
- splenic artery

## Inferior border

# Pancreas



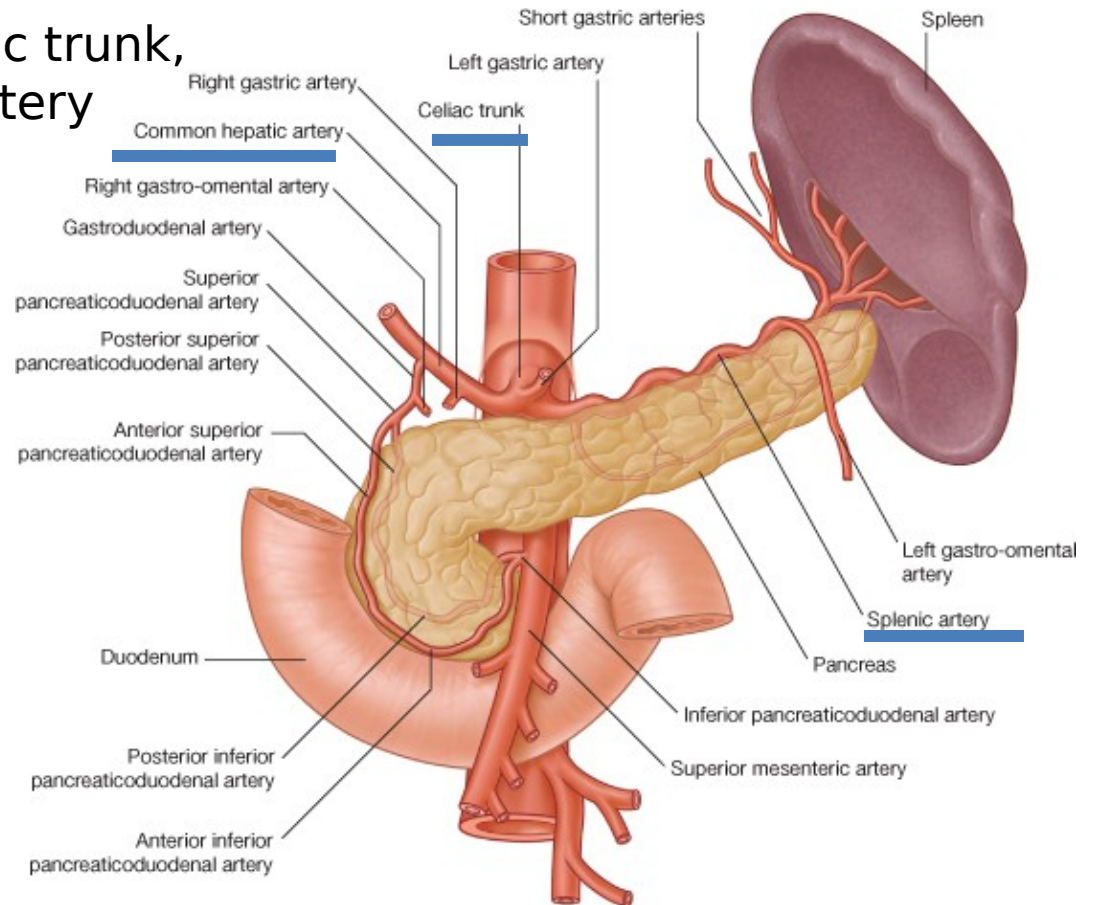


# Pancreas



## Superior border

The border is related to celiac trunk, common hepatic & splenic artery

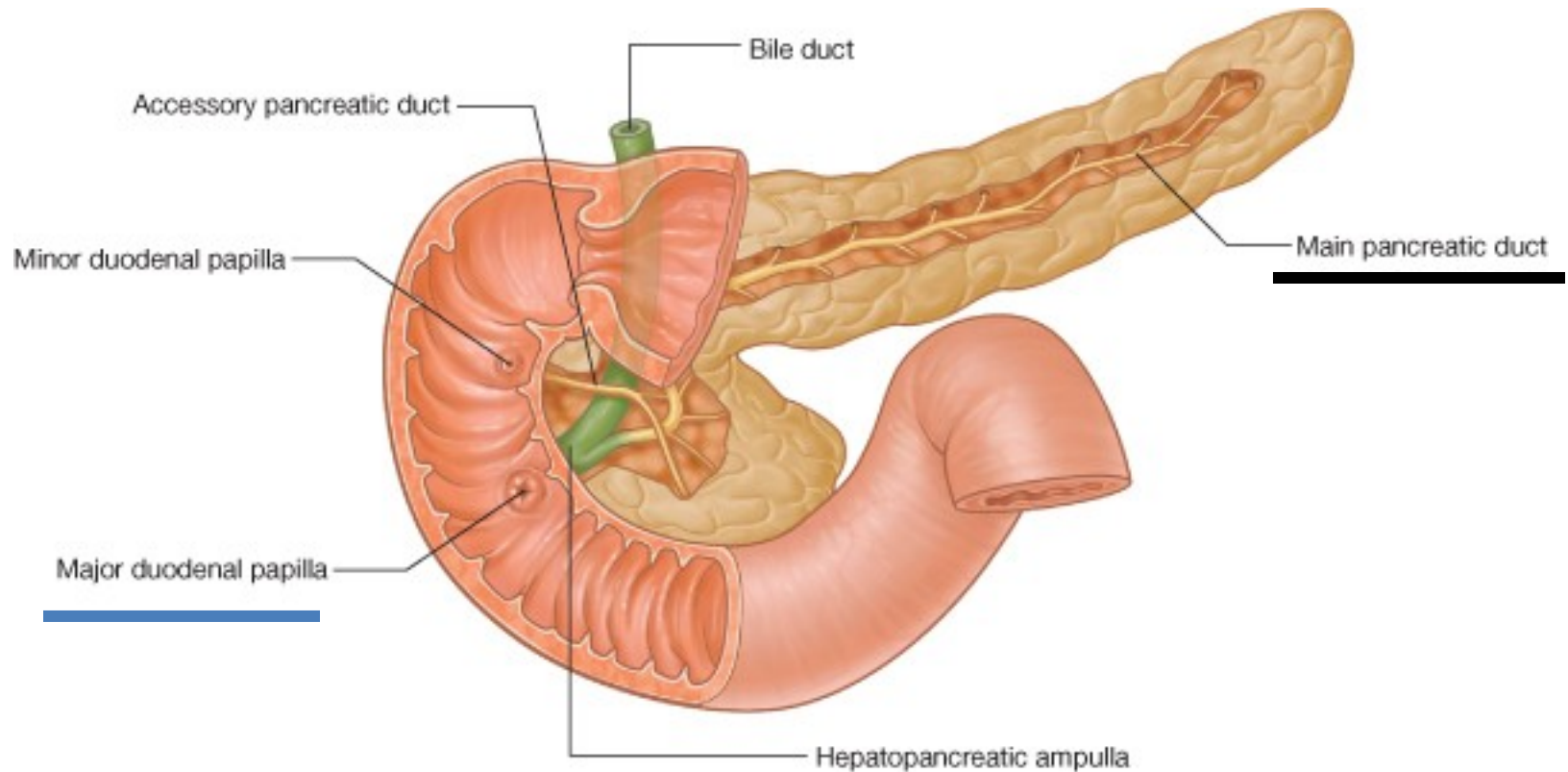




## Main pancreatic duct

- ☐ Arise from tail of pancreas
- ☐ Turns inferior & to the right
- ☐ Unites with bile duct in submucosa of posteromedial part of 2 part of duodenum
- ☐ Form heptopancretatic ampulla of vater
- ☐ Open in.....

# Pancreas



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# Accessory Pancreatic Duct



Begins in **lower** part of head



Ascends in **front** of main duct

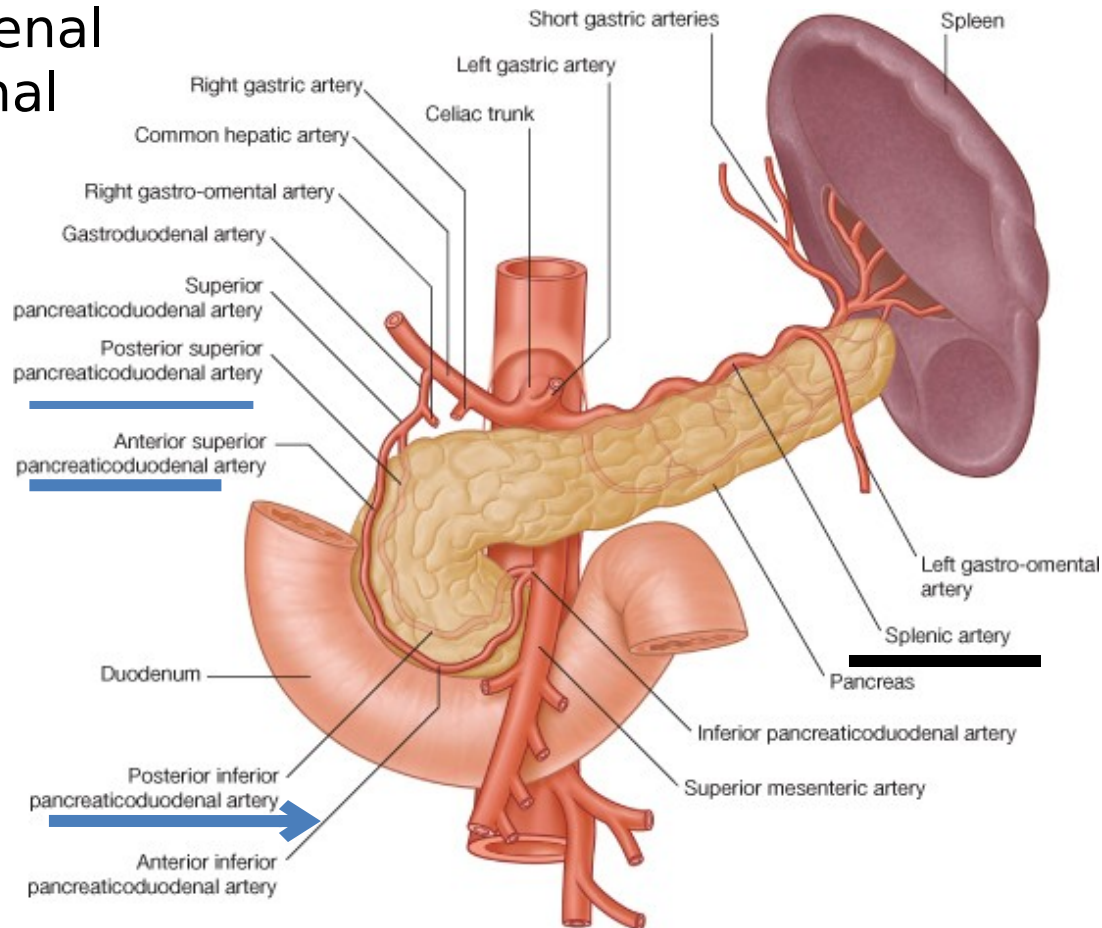


Opens **above** in small .....

# Blood supply of Pancreas



- ✓ SuperiorPancreaticoduodenal
- ✓ Inferior pancreaticoduodenal
- ✓ Splenic artery





❑ **Venous drainage** : in splenic and superior mesenteric veins and portal vein

❑ **Lymph drainage:**

❖ **Head:** in pyloric & superior mesenteric

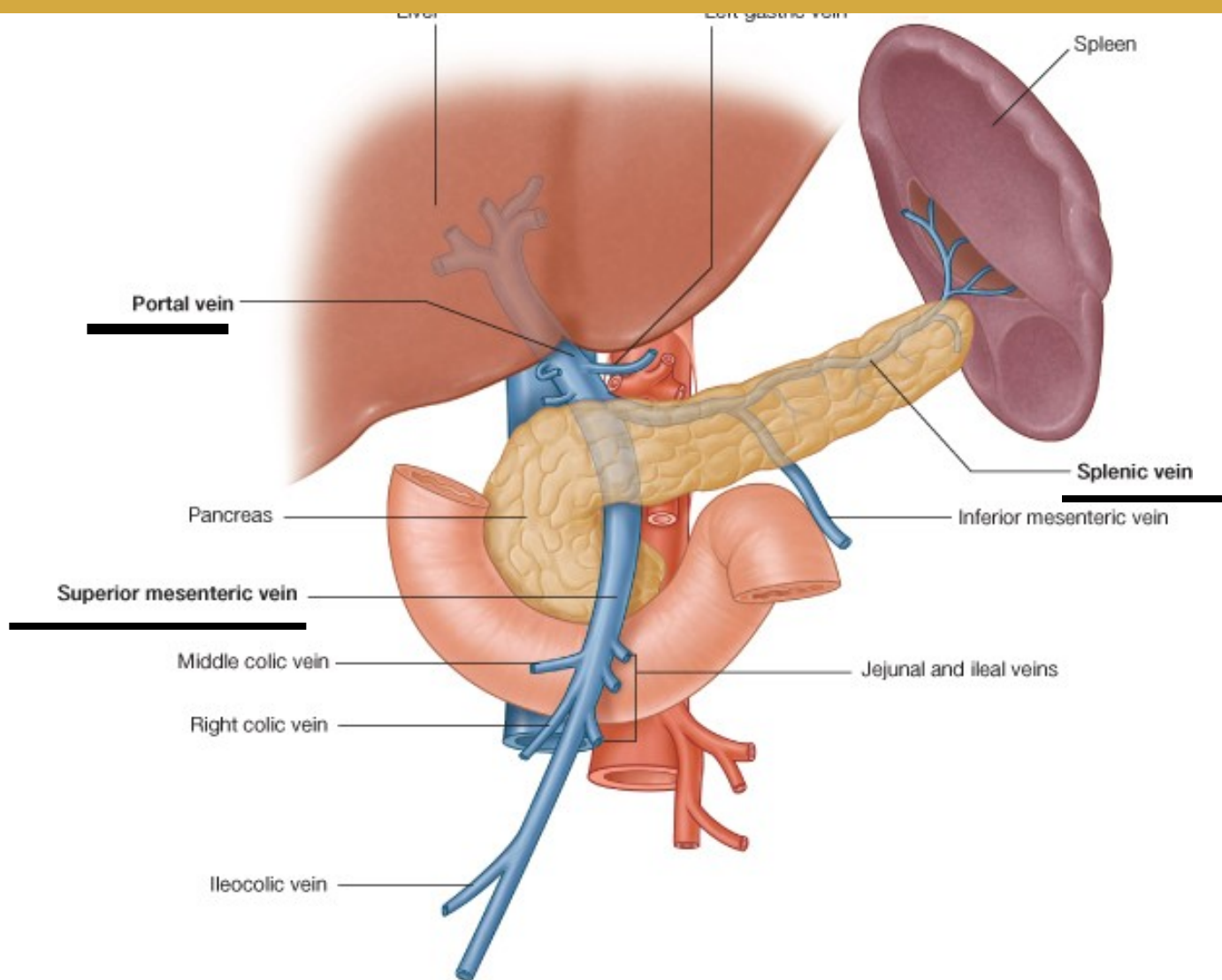
❖ **Body** : pancreatico-splenic

❖ **Finally** all to coeliac lymph nodes

❑ **Nerve supply** : Coeliac plexus



# Pancreas



# Spleen

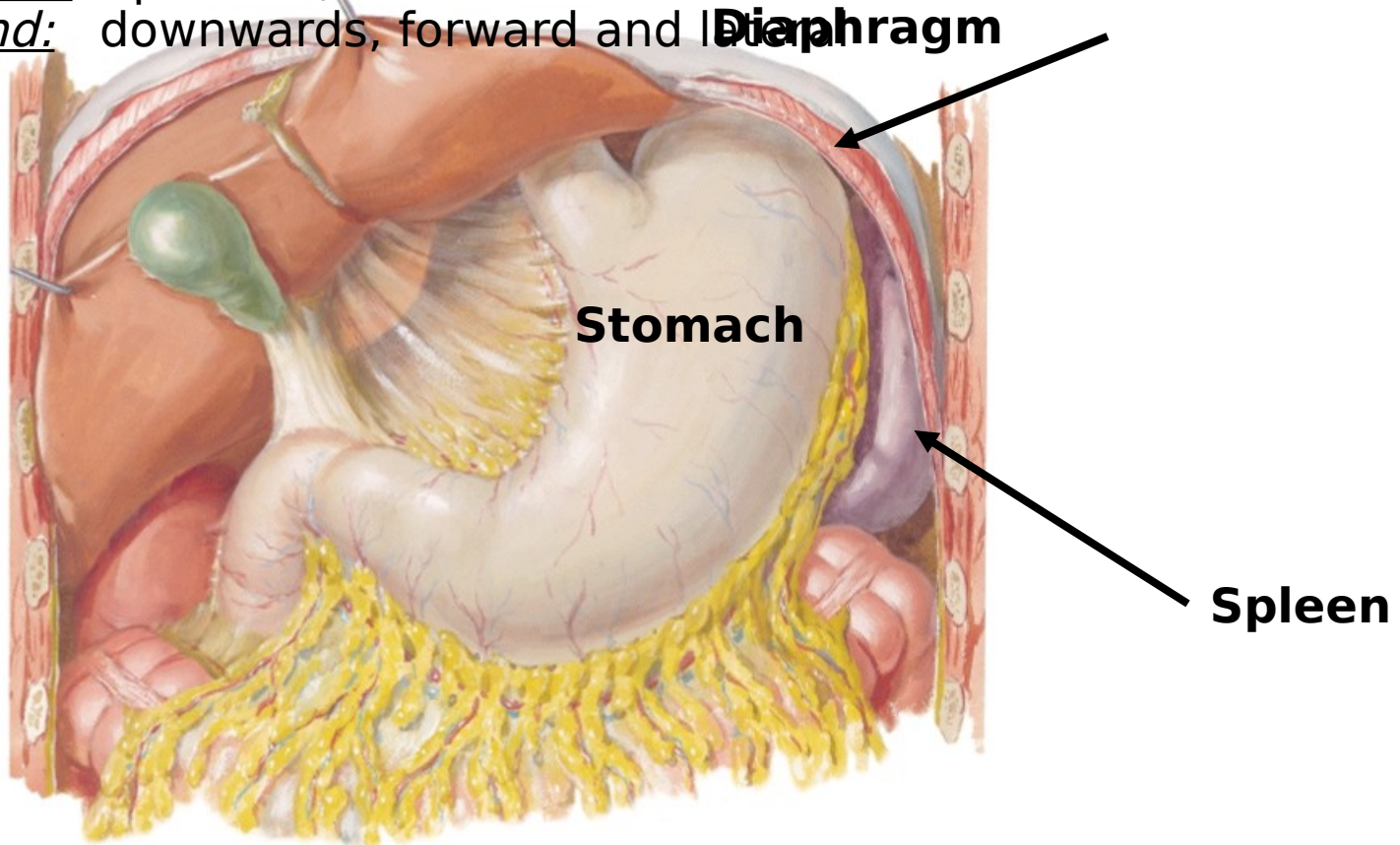


- Lymphoid organ that lies in left hypochondrium
- It is 1, 3, 5 inches
- 7 ounces
- It has 2 ends, 2 borders, 2 surfaces

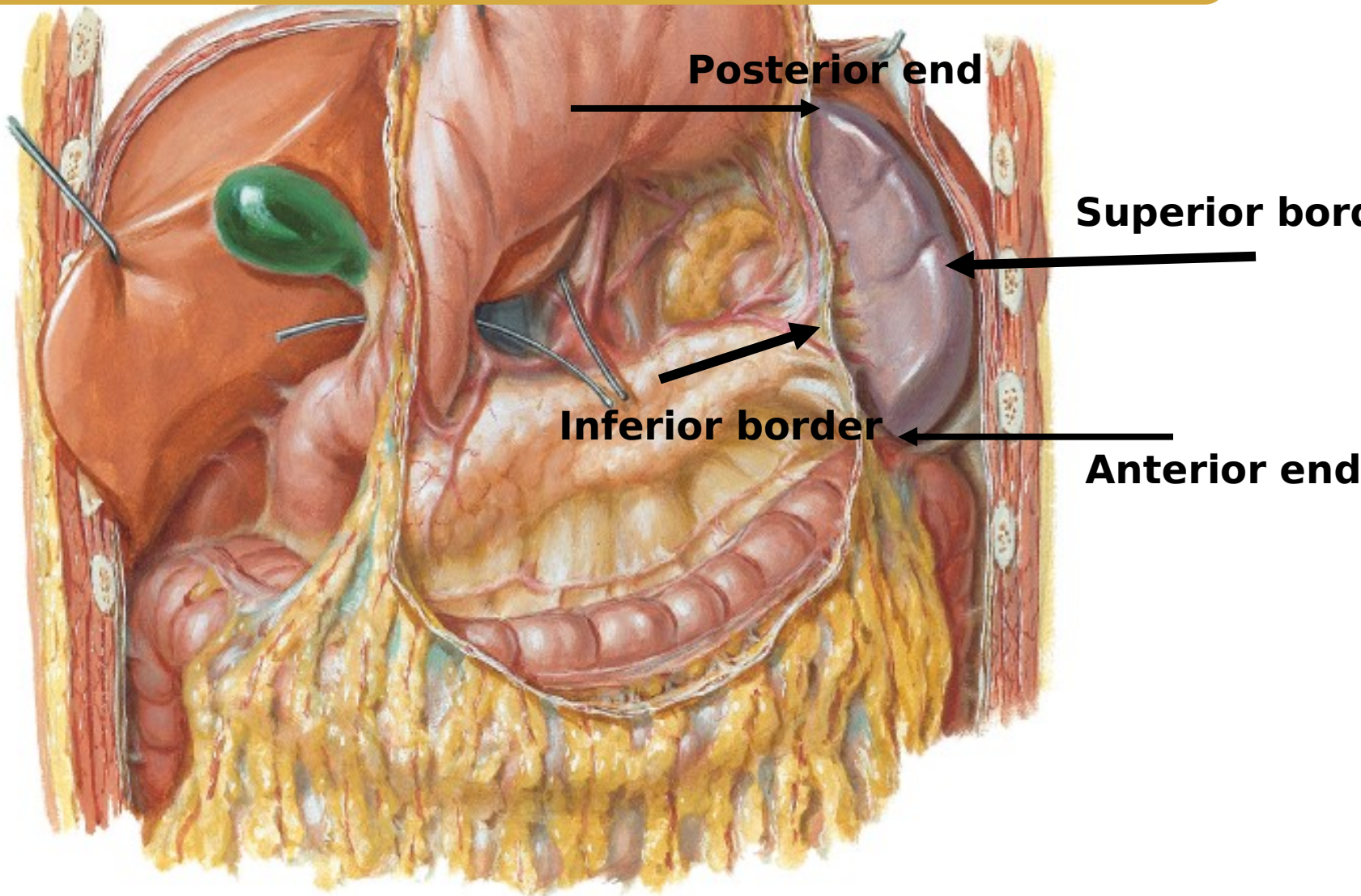
## **Ends:**

Posterior end: upwards, backwards and medial

Anterior end: downwards, forward and lateral



# Spleen



# Borders of Spleen



- Superior border:  
convex, sharp, near anterior end and has notches
- Inferior border:  
more blunt, rounded

# Surfaces of Spleen

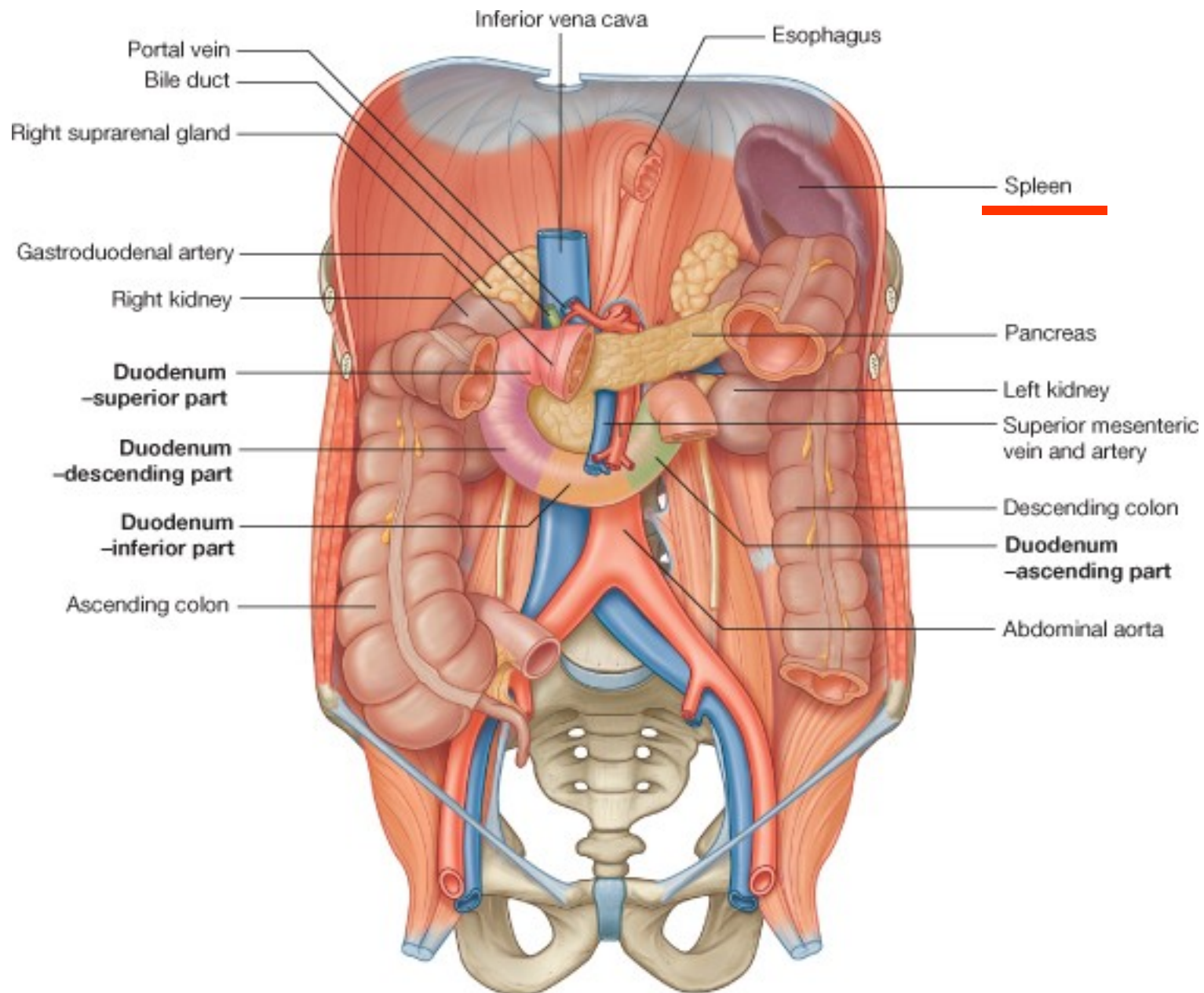


## Surfaces:

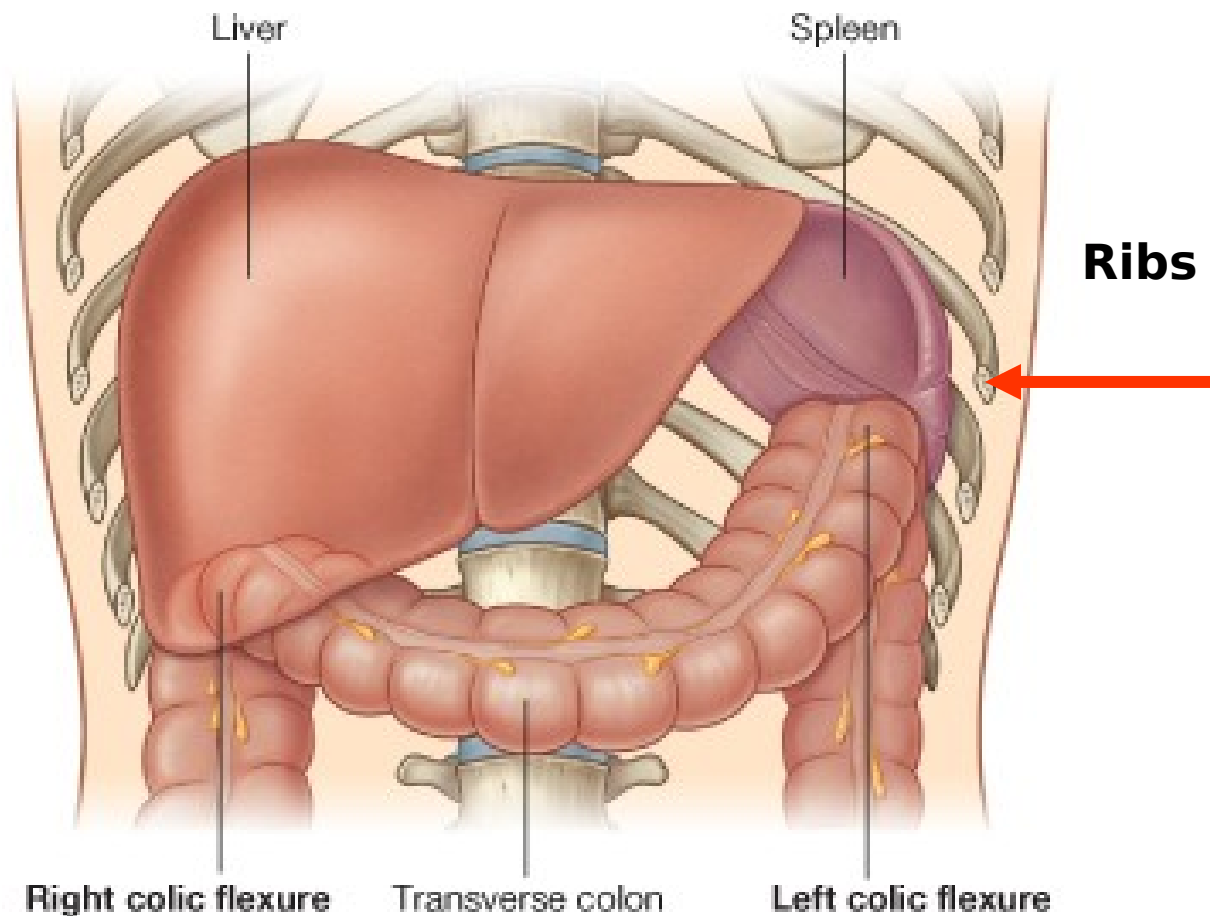
### Diaphragmatic:

- Convex,
- smooth related to diaphragm separating it from left lung and pleura and ribs 9 to 11









# Visceral surface of Spleen



- **Gastric impression:**

related to fundus of stomach, broad and concave

- **Renal impression:**

- ✓ related to left kidney lies close to inferior border

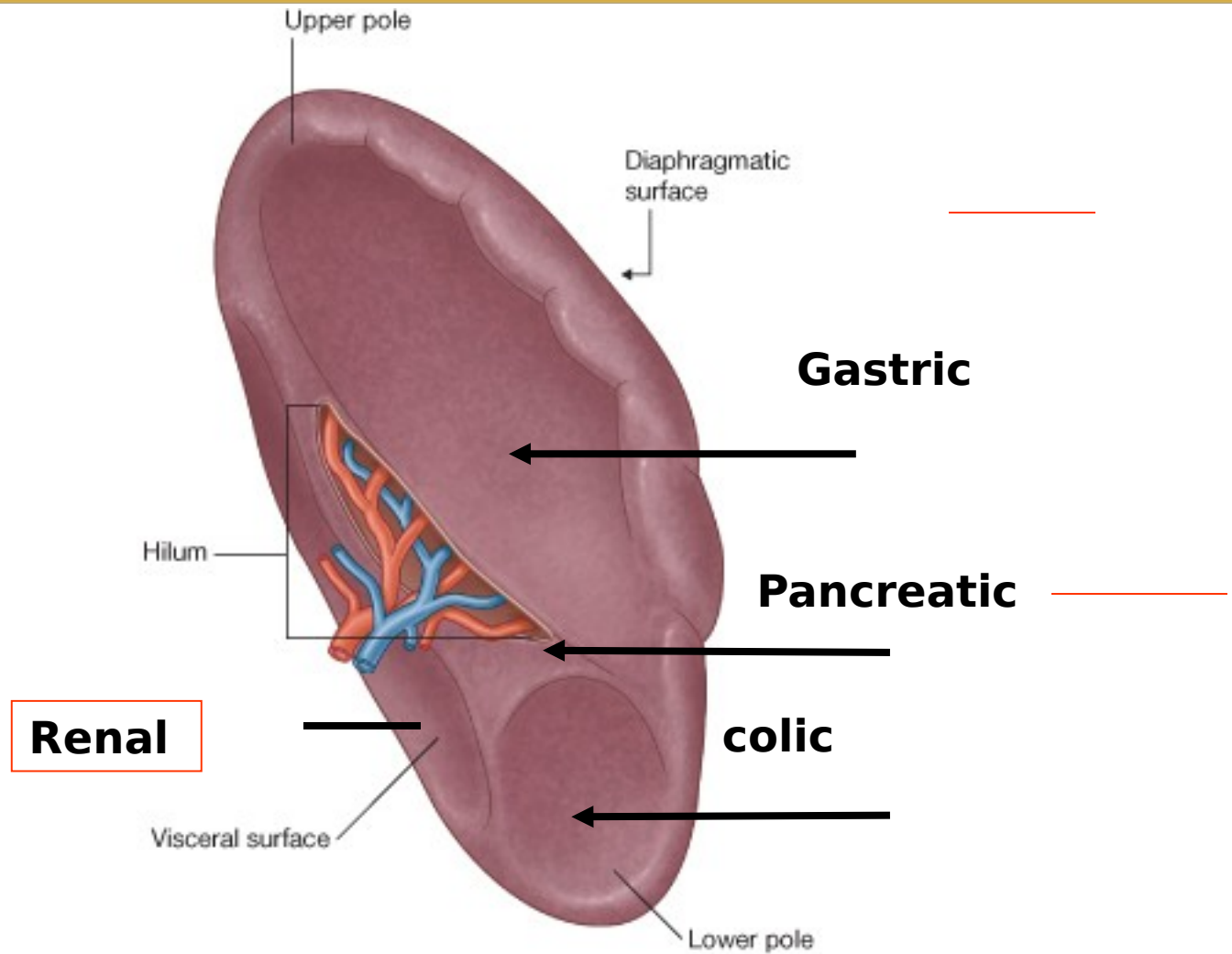
- ✓ Both are separated by hilum and intermediate ridge

- **Colic impression:**

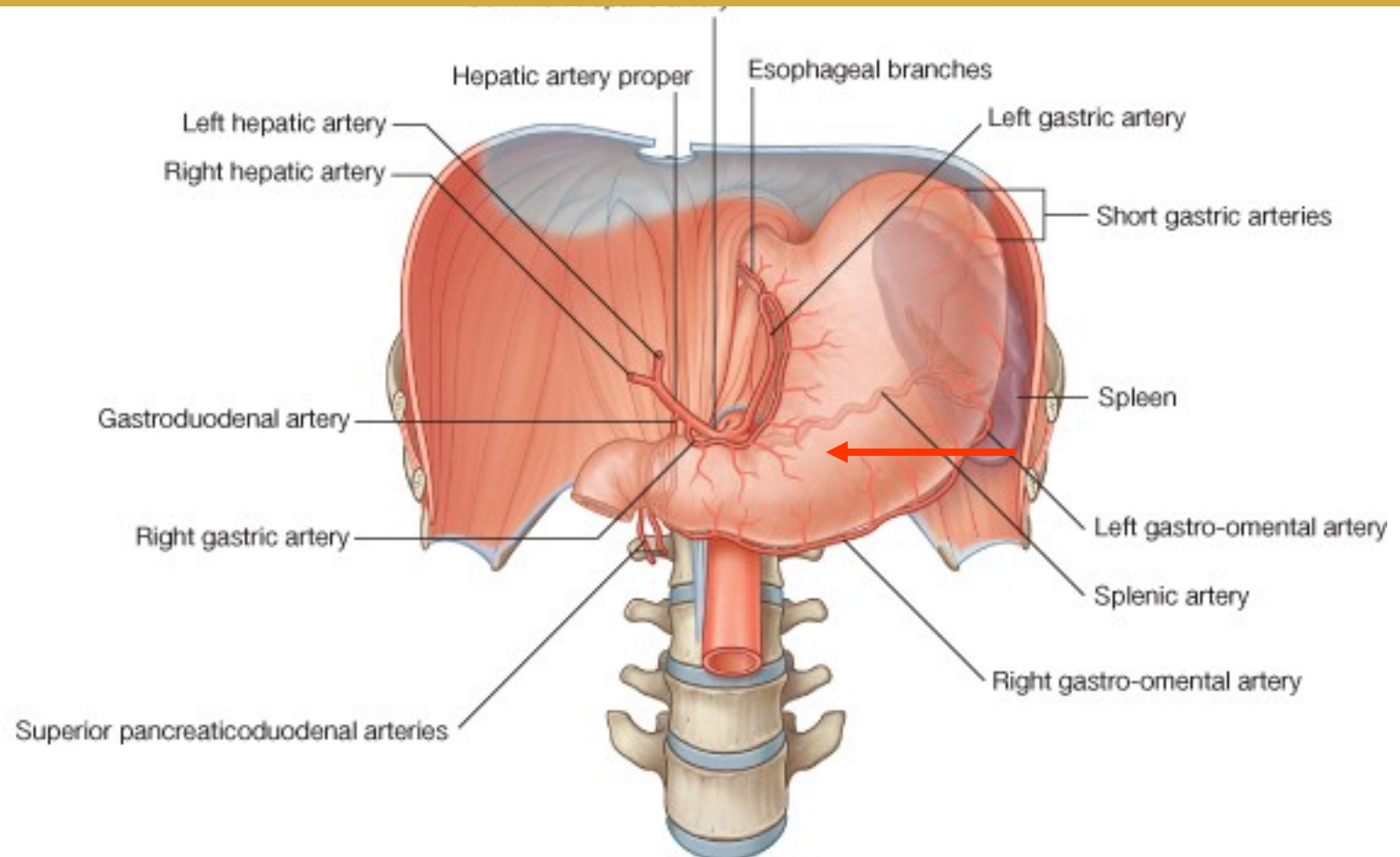
close to lateral end related to left colic flexure

- **Pancreatic impression:**

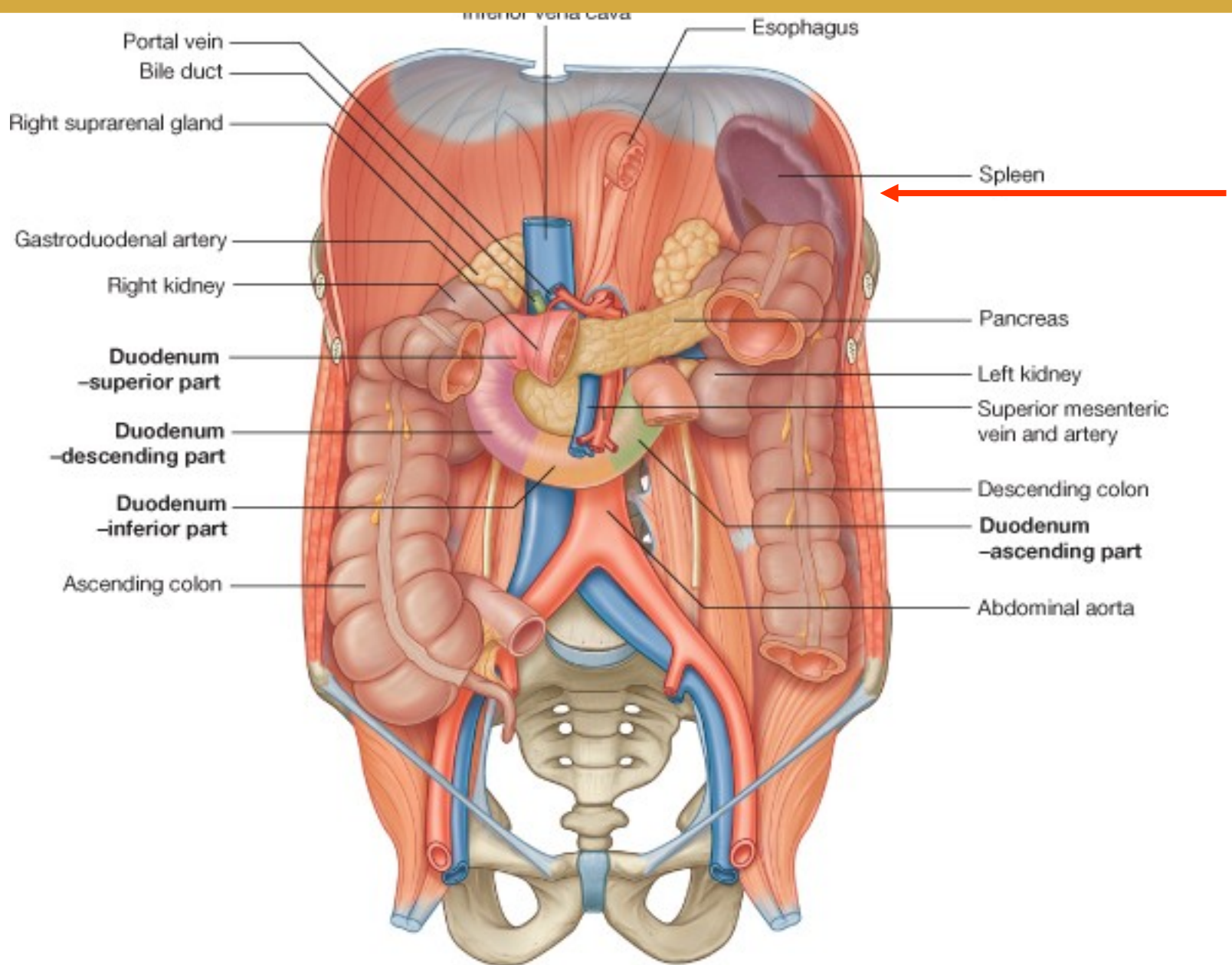
# Spleen



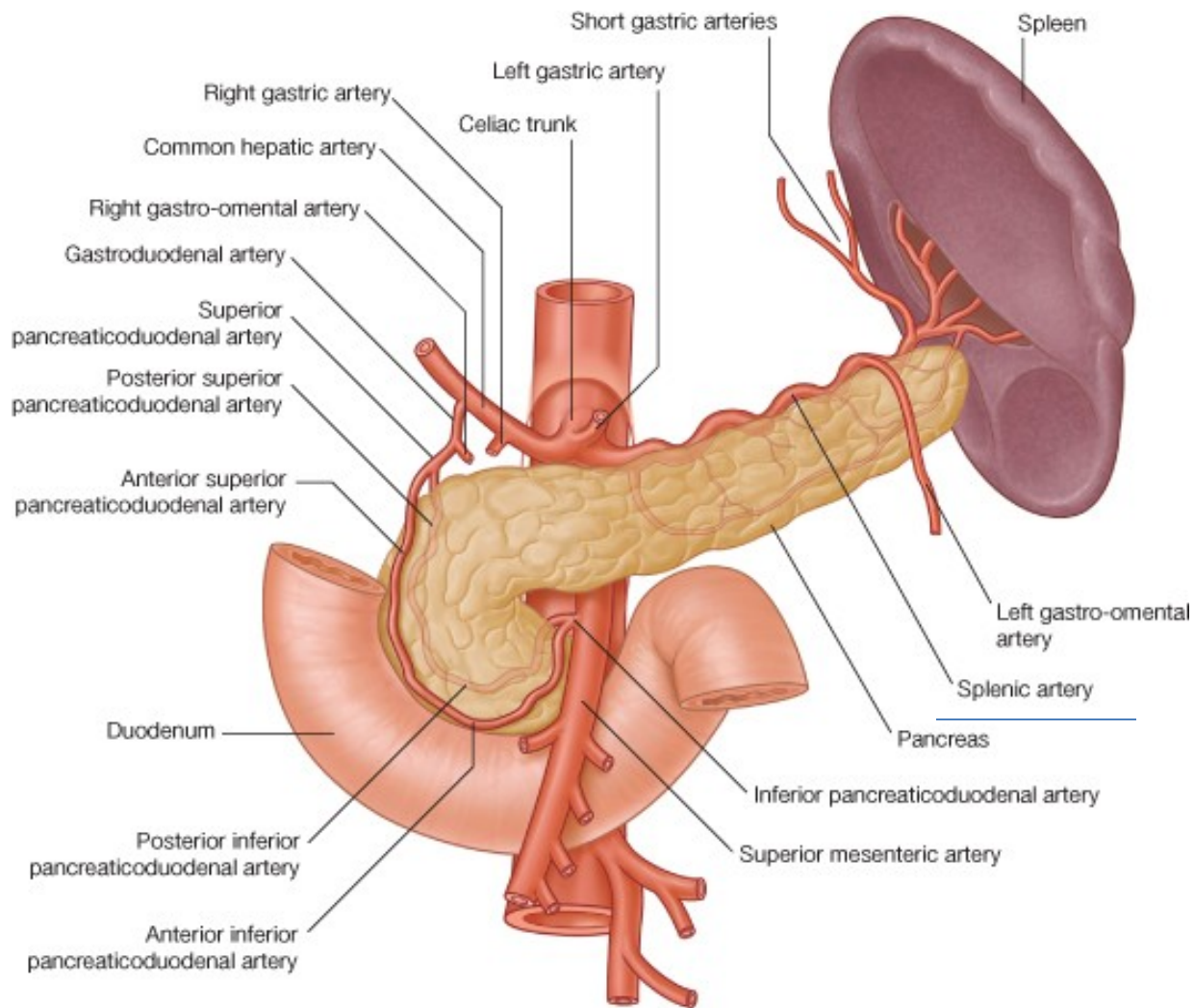
# Spleen



# Spleen



# Spleen





# Peritoneal coverings

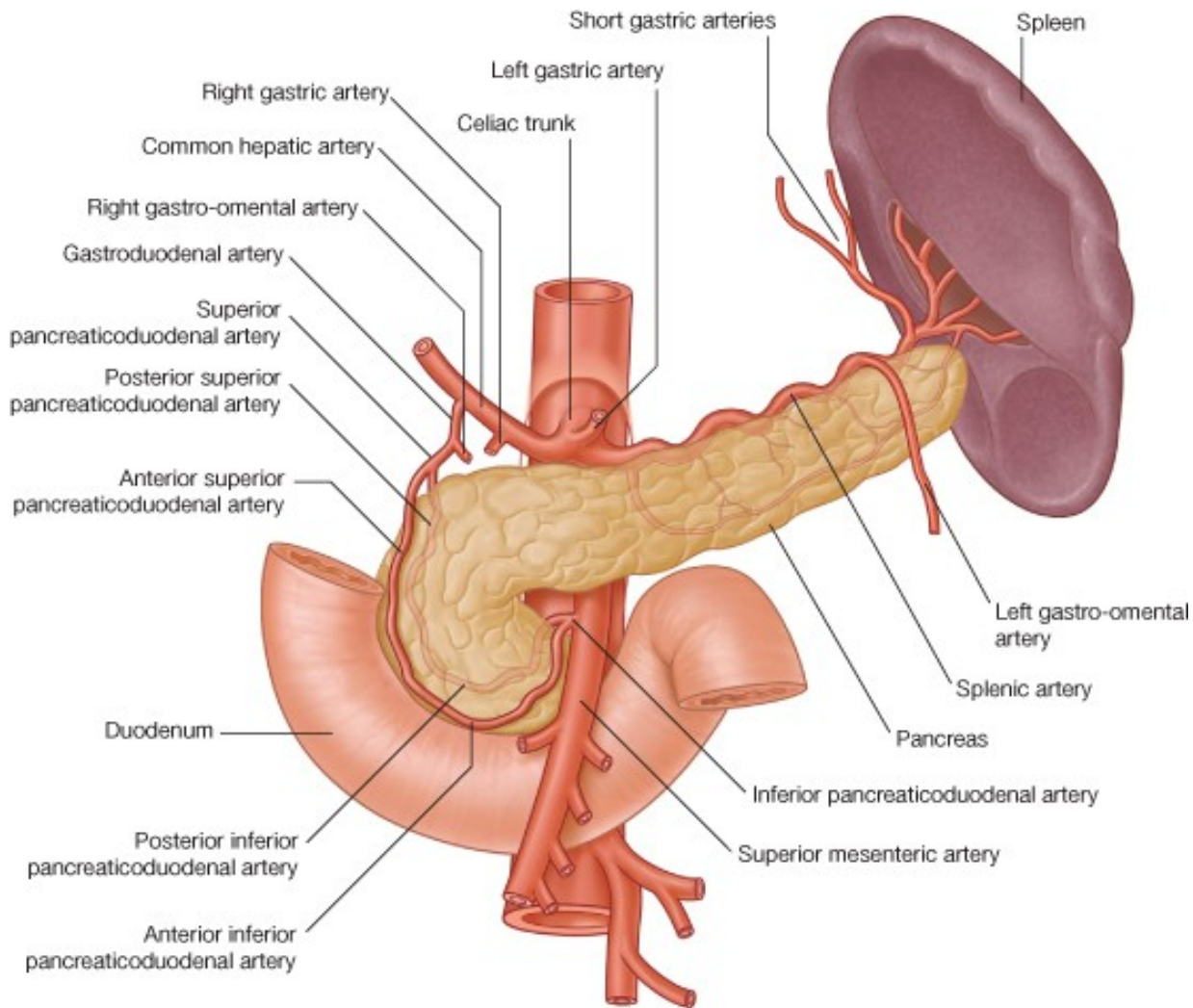


- Completely covered by peritoneum connected to left kidney by lieno renal ligament and to stomach by gastro splenic

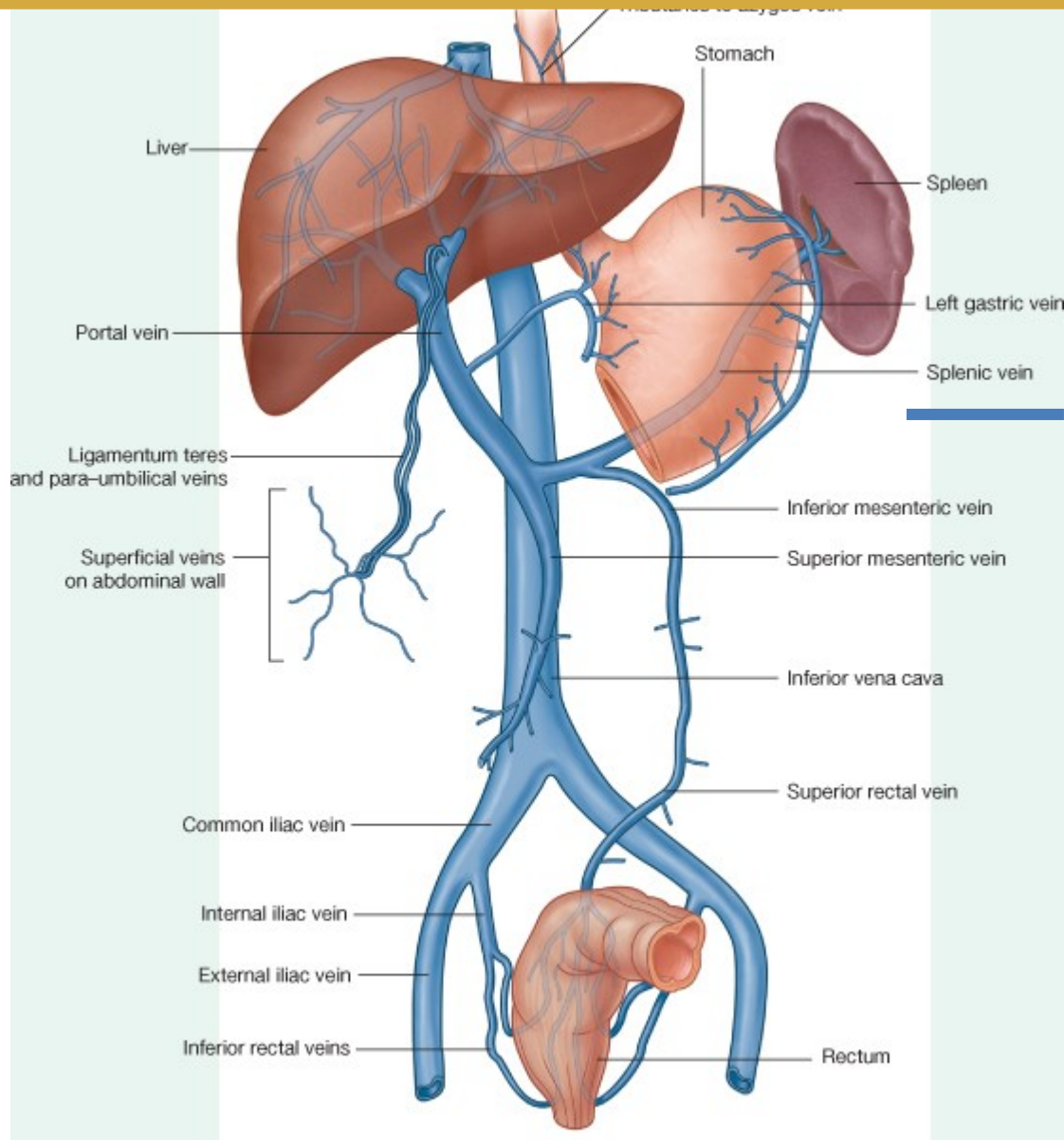
## **Lieno renal ligament:**

- Contains splenic artery, vein
- Tail of pancreas
- Lymph nodes

# Blood supply of Spleen



# venous drainage of Spleen



# Surface anatomy of Spleen



- It lies opposite 9,10,11 ribs
- **Posterior end:** one and a half inch from mid dorsal line at level of 10 thoracic spine
- **Anterior end:** reaches mid axillary line

Thank  
you!

**GO FOR IT !**



**GOOD LUCK !**

